

# FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

Monday September 30 1985

Arms control: Soviet tactics take a new turn, Page 17

No. 29,740

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## World news

## Business summary

### Brixton rioters leave trail of damage

Rioters in the South London district of Brixton left a trail of injury, damage and looted shops. At least 53 people - including 10 policemen - were hurt during the night of clashes, sparked by the accidental shooting of a police officer. Four buildings were damaged, including two which were completely gutted by fire, and police reported more than 130 major crimes at the time, of which 58 were burglaries. Police have set in motion an inquiry into the shooting. Page 18

### BA in 'lone push' for fares flexibility

BRITISH Airways intends to act alone in seeking more liberal regulations covering fares and services on European routes. The move is seen as a breach in the previously united European airline industry. The split emerged after a meeting of the Association of European Airlines in Brussels on Friday which was called to liberalise European air transport. Page 18

### S. Africa deaths

Seven blacks died in a weekend of township violence in Johannesburg, South Africa, as conflicting predictions circulated on whether President P. W. Botha would outline major apartheid reforms in a speech today. Page 18

### Airport reopens

Beirut airport has reopened, 24 hours after shells crashed into the main terminal building during Muslim-Christian fighting. Page 18

### Separatist victory

Melanesian separatists won control in elections of three out of four regions of the French territory of New Caledonia in the South Pacific. Page 3

### New President

Eric Arturo del Valle was sworn in as President of Panama as Nicolas Ardito Barletta resigned less than a year into his term. Page 3

### Paris protest

Several hundred people demonstrated in Paris calling on Moscow to allow Jews to emigrate. Soviet leader Mikhail Gorbachev is due to visit the city on Tuesday. Page 3

### Missile denial

North Korea has denied a Japanese news report that the Soviet Union was shipping missiles to Iran via North Korea and Syria. Page 3

### 5,000 protest

About 5,000 demonstrators clashed with police, smashed store windows and looted last night in Frankfurt after a demonstration on Saturday against a Neo-Nazi party meeting in which a protester was killed by a water cannon truck and 22 police injured. Page 3

### Sikh clashes

One person died in clashes between moderate Sikhs and supporters of the widow of one of Indira Gandhi's alleged assassins as the new Sikh government of Punjab State was sworn in. Page 2

### Mugabe on merger

Zimbabwe's Prime Minister Robert Mugabe has a successful merger between his ruling party and the main opposition party of Joshua Nkomo would not affect his government's socialist programmes. Page 2

### Coup arrests

More than 180 people have been arrested in Sudan in connection with an abortive coup attempt by southern Sudanese in Khartoum last week. Page 2

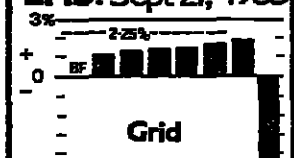
### Death sentence

A man who made marmara from chimney soot which harmed women's eyes has been sentenced to death by firing squad in the northern Caucasus region of the Soviet Union. Page 2

### Haughey rescued

Former Irish prime minister Charles Haughey was rescued from a life raft off the southern tip of Ireland after his yacht sank. He was unhurt. Page 2

### EMS: Sept 27, 1985



EUROPEAN Monetary System: The Belgian franc lost ground within the EMS last week and the Belgian central bank intervened in currency markets to lend support. Pressure on the franc developed as the D-Mark rose sharply against the dollar, following the five-nation agreement to reduce the value of the dollar. The strength of the D-Mark depressed other EMS currencies as well as traders bought the German currency in preference to others. Although weaker, the Belgian franc remained comfortably within its divergence limit.

The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rate from which no currency (except the lira) may move more than 24 per cent. The lower chart gives each currency's divergence from its 'central rate' against the European Currency Unit (ECU), itself a basket of European currencies.

U.S. TRADE representative Clayton Kopp is preparing to begin consultations with key committees in the U.S. Congress and American business interests on proposed liberalised trade talks between Washington and Canada. Page 4

MALAYSIA'S biggest ever stock market launch starts today with the issue of 30 per cent of Malaysian Airline System's capital which will raise 180m ringgit (\$77m). Page 19

ITALIAN Government authorised the opening of a European bond market, clearing the way for the issue of lira-denominated foreign bonds. Page 19

WORLD semiconductor industry will make a dramatic recovery next year, according to the Semiconductor Industry Association, which predicts sales growth of 18 per cent. Page 4

GOULD, U.S. electronics group which has suffered heavy losses on its semiconductor operations, refused to comment on reports that it was having talks on a possible takeover by Siemens, the West German electrical giant.

GUATEMALA offered to acquire the 10 per cent of Abitibi-Price, the Toronto-based newsprint and forest products group, which it does not already control for C\$85m (\$69.8m). Page 19

ATLANTIC Richfield Company (Arco), Santa Fe Minerals Asia Incorporated and the China National Offshore Oil Corporation have signed a contract reportedly worth \$500m to develop a gas field in the South China Sea. Page 4

DEBT rescheduling has taken much of the heat off the world's debt crisis, but interest payments on debt remain a problem. Statistical trends, Page 6

## Saudi Arabia adopts tough stance on Opec output

SAUDI ARABIA is going into the meeting of the Organisation of Petroleum Exporting Countries (Opec) this week more determined than ever to confront the other members and have them reduce their oil production, so that its own can be raised, writes Michael Fields in Riyadh.

In recent months Saudi Arabia has been the only member of Opec that has not been cutting its prices directly or indirectly and in consequence its exports in August fell to little more than 1m barrels a day (b/d) from more than 9m b/d four years ago.

To raise its output, the Kingdom has recently negotiated a series of "backstop" deals with Exxon, Texaco and Mobil involving the sale of its oil at market prices less the cost of freight and refining. The deals, which involve at least 800,000 b/d in extra production, are due to come into operation tomorrow. It is thought in Saudi Arabia that they

might not be implemented or could be quickly terminated if the other members agree to abide by official pricing policies at the Opec meeting.

The Kingdom's production this month has already risen from below 2m b/d to about 3m b/d, giving exports of some 2.3m b/d. If this level of output is maintained or increased it may trigger a pricing war, in which Saudi Arabia's oil, the Oil Minister, warned earlier this month could lead to per barrel rates dropping to \$15-\$18 after the winter.

An indication of the determination that lies behind the new production policies was given last week by King Fahd in a question and answer session with students at the Umm al-Qura University in Mecca.

"Nobody has the right to object to the Kingdom's oil policy under special circumstances," he said. "I don't object to others' policies I

don't expect objections to the Kingdom's policies."

The apparent toughening of Saudi policy, which in the past has often been marked by strong words but a reluctance to back threats with action, is not the result of any major debate in the country.

Rather, it seems likely that a significant number of princes and businessmen have complained to the King that conditions are becoming intolerably difficult, and the King has felt forced to act.

No debate on oil policy exists even though the economy is strained.

Sheikh Yamani, and Petromin, the state oil company under its governor Abdul-Hadi Taber, strongly oppose public discussion of oil matters. Newspapers have been persuaded not to run features on oil and senior civil servants who have sometimes expressed opinions in favour of a more free market ap-

proach have been discouraged from repeating their views.

The King, who makes the final decisions on issues relating to oil, has been exposed almost exclusively to the views of his Oil Minister, who gives less emphasis to the operation of market forces.

Our Middle East Staff writes: the first shipment of Iraqi oil from Yanbu to Saudi Arabia's Red Sea coast was made at the weekend with a cargo destined for Petrobras of Brazil.

Iraq's new export outlet with a capacity of 500,000 b/d via Saudi Arabia's trans-peninsula pipeline system presents a major new threat to Opec's willing efforts to maintain prices.

Baghdad is planning average sales of 400,000 b/d from Yanbu in the fourth quarter without any matching reduction in exports via the pipeline system to Ceyhan on Turkey's south-eastern Mediterranean coast. This ran at a record level of 1.1m b/d in July, but fell to 820,000 b/d in August.

Iraq has given notice that it wants Opec's agreement to an increase in its output quota from the present 1.2m b/d to at least 1.6m b/d, but will maximise exports regardless, if the assent of other members is not forthcoming.

With Iran's exports cut to a trickle, meanwhile, Mr Ali Akbar Hashemite Rafsanjani, the Speaker of the Parliament in Tehran, hinted at retaliation against Iraqi exports.

"It is possible that we will deploy another great force towards the pipes which go to Turkey and pass near Syria," he said, warning that Iran would regard the Saudi trans-peninsula pipeline system as a strategic target if oil was pumped through it.

Iraq yesterday said that its Air Force had mounted another raid, the sixth in as many days, on Iran's Kharg Island oil terminal.

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## Italy aims for real cut in public borrowing

By James Buxton in Rome

THE ITALIAN Government is aiming to reduce its public sector borrowing requirement in real terms next year in the budget and finance bill it will present to parliament today.

The budget entails reductions in government spending and rises in charges for services provided by the state. But the cut in spending is much less than some ministers, including Sig. Giovanni Goria, the Treasury Minister, had suggested were necessary if Italy was to get its runaway deficit under control.

The Government expects a deficit this year of L1,087,000bn (\$59.2bn), which by its calculations will be 15.8 per cent of gross domestic product (GDP). For 1986 it is aiming at a target of L1,100,000bn - 14.6 per cent of GDP, which is expected to rise next year by between 2.5 and 3 per cent.

The proportion of the deficit to GDP will still be well above the level of most industrial countries. Under the measures agreed by the Cabinet late on Saturday, however, the deficit would approach L1,144,000bn. Unless the deficit grows at a slower rate than expected, further spending cuts or measures to raise revenue will be necessary if the Government's target is to be met.

"We've done a good job," said Sig. Bettino Craxi, the Prime Minister, after the Cabinet meeting. "We haven't resolved every problem, as is natural."

The Government is not raising taxes in 1986, and intends to reform the income tax system in a way which will reduce revenues next year.

Rome nevertheless intends to cut its borrowing requirement next year by L1,750bn. Health spending will be contained by raising prescription and other charges, while health insurance contributions will go up, with the burden falling mainly on employers.

The indexation mechanism for pensions is to be applied only every six months instead of every three months. Some welfare benefits are to be reduced. Families with only one child will no longer receive child benefit.

Concessional rates for electricity and telephone charges are to be cut, and charges for school and university will rise.

Legislation is to be drafted to enable local authorities to levy their own taxes in order to compensate for reduced transfers from the state.

The budget and finance bills have to be approved by parliament by the end of the year.

## U.S. welcomes arms proposal but insists on SDI research

BY NANCY DUNNE IN WASHINGTON

REAGAN ADMINISTRATION officials yesterday welcomed news of forthcoming Soviet proposals in Geneva for cutting strategic offensive arms up to 50 per cent, but insisted that they would not give up research and testing of defensive systems allowed under a previous treaty.

Mr George Shultz, the U.S. Secretary of State, said the Soviet Union would present counter-proposals to the intermediate weapons and strategic arms group in Geneva on Monday and Tuesday, while also presenting proposals to the state defence group. "This might be one way to get round Soviet preconditions that link talk on offensive weapons to President Ronald Reagan's Strategic Defence Initiative (SDI)," he said.

But he insisted: "Any deal on research would be ridiculous. There is absolutely no way to verify whether it is being observed."

He said President Reagan simply wanted to know through research if it is possible to defend against ballistic missiles. "That answer can be gotten within the anti-ballistic missile treaty," he said.

In several interviews over the weekend, U.S. officials expressed concern about the details of the Soviet proposals for cutting offensive weapons and questioned whether they involved reductions in large land-based intercontinental missiles which can strike U.S. missile sites.

Mr Richard Perle, the hardline Assistant Secretary of Defense, called the Soviet proposals "a throwback to the 1970s," and predicted that "they will attempt to define reductions in a self-serving way... That is, reducing systems on our side when comparable systems are not reduced on their side."

"They want to halt the U.S. (SDI) programme and to confine it so it

won't go forward, while they continue with their own research," he said.

Senator Albert Gore, observer at the Geneva arms control talks, insisted that it was impossible to limit the talks to offensive weapons.

The development of anti-missile defences will force both sides to increase their offensive missiles in order to penetrate the defensive shield, he said.

The new Soviet proposals might make it possible to get an agreement which would eliminate the ability of either side to benefit from a first strike, the Democratic Senator said. He recommended that the Administration use the SDI programme as a bargaining chip and at the same time work towards defining "a variable distinction and boundary between permanent research and development of the kind which would lead us down the road to deployment."

Mr Perle, however, said the Administration is not interested in discussing definitions of research and testing laid down under a previous treaty. These, he insisted, were perfectly clear to the Soviets in the years they were working hard on their own star wars programme.

Mr Shultz said that while the U.S. wanted to reduce nuclear weapons, it would not agree to something just to have a deal for President Reagan to sign at his summit meeting with the Soviet leader, Mr Mikhail Gorbachev, in November.

One official said the Soviet Union may propose elimination of medium-range missiles in Europe. If the Americans are perceived to be scuttling the Soviet proposals for the sake of the star wars programme, he said, Moscow may then be able to divide the U.S. and its allies.

Soviet habits change, Page 17

## Move to open ADR trading to UK firms

By Barry Riley in London

THE LONDON Stock Exchange is moving to allow U.S. associates of its member firms to take part for the first time in the burgeoning New York market in UK stocks repackaged as American depositary receipts (ADRs).

The rule amendment by the London exchange's council comes as New York securities markets prepare to open 30 minutes earlier from today, another reflection of the growing competition between international markets. The start of trading on the New York and American exchanges is being brought forward to 9.30am New York time.

At present, London firms and their overseas subsidiaries are barred from trading in dual capacity - that is, as both brokers and market-makers - in any UK-listed stock. But specially constituted "international dealers" are permitted to operate on a dual-capacity basis in foreign stocks.

This has led to the anomaly that British firms are shut out of the highly active New York market in the ADRs of stocks such as ICI, Glaxo, and BAT Industries.

The restriction has remained in place to protect the central market in such stocks in London. But it is now thought that the market in New York has become so active and independent that the rule is counter-productive and is damaging British firms.

The change is thought to be sensitive, however, and an extended confirmation period is being allowed to give time for objections to be lodged. It is not likely that the change will take effect before October 22.

Elaborate rules will remain in place to prevent the erosion of the strict separation of broking and market making, which will remain in force in London until the "big bang" restructuring of the market in approximately a year's time.

Thus, New York offshoots of British securities firms will be able to trade in dual capacity in UK ADRs but only on behalf of clients resident in North America.

Agreement on Tariffs and Trade (GATT), which allows a country to grant its industries emergency import relief.

Article 19 was clearly intended to be used in exceptional circumstances to give temporary relief. The use of "grey areas action" such as voluntary export restraints is "distorting trade patterns and imposing economic costs," the GAO says.

The dispute settlement process of GATT, highly criticised by the Reagan Administration, gets kinder words from the GAO. The process at least "fosters the consultations and dialogue necessary to even begin resolving differences."

The agency says GATT is being called upon to settle disputes that frequently involve government intervention in domestic economies.

## EEC, U.S. 'create steel cartel'

BY NANCY DUNNE IN WASHINGTON

THE U.S. and Europe have effectively established a transatlantic steel cartel that protects their traditional trading arrangements and inhibits trade with newer market entrants, according to U.S. General Accounting Office (GAO).

The GAO, an independent investigative agency, says the industrialised world's two largest trading groups have done so by import restrictions, which "have had the effect of cartelising world steel trade."

The troubles of the world steel trade, the report says, stem from global excess capacity, the long-term shift in comparative advantage from the developed to the developing world, and the view in the industrialised world that steel is a critical industry that must be preserved.

Hopes rose of a compromise over the wording of the agenda of this week's General Agreement on Tariffs and Trade meeting which would prevent an immediate breakdown over the controversial issue of trade in services.

"By adopting similar remedies for dumped, subsidised and fairly traded steel, mature producers have increasingly blurred that distinction," the GAO says. "The result has been to bypass the use of GATT remedies for the myriad problems faced by the steel industry."

The GAO expresses its concern about the increasing use of voluntary export restraints and orderly marketing agreements, instituted instead of Article 19 of the General

Agreement on Tariffs and Trade (GATT), which allows a country to grant its industries emergency import relief.

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## OVERSEAS NEWS

## President's Rule ended in Punjab

By John Elliott in New Delhi

DEMOCRATIC government was restored to the northern Indian state of Punjab yesterday when two years of President's Rule were formally ended and the Akali Dal state Government elected last week was sworn into office.

Moderate Sikhs who form the Akali Dal Party now have the responsibility of running this prosperous but troubled state under the leadership of Mr Surjit Singh Barnala, the new but little-known Chief Minister.

Mr Barnala last night issued a statement which included controversial policies to win back the trust of the Sikh population, including dissident youth who in the past two years have been attracted by the extremists. He said he would be setting up a committee to release young Sikhs from jail and would appoint an inquiry to look into the "association, connivance and support of political elements" with the extremists.

He knows he can count on the support of Mr Rajiv Gandhi, the Indian Prime Minister, for his government which he pledged would implement the peace accord recently reached on the Punjab and would "pursue the policies of constructive co-operation rather than confrontation" with Mr Gandhi's central Government.

When Mrs Indira Gandhi, the late Prime Minister, was in power there was often friction between the states and the central Government, an approach which Mr Gandhi has shunned.

Five ministers were appointed yesterday to the Punjab Cabinet by Mr Barnala. They include Mr Balwant Singh, a former Punjab Finance Minister and a businessman with international interests.

But Mr Parkash Singh Badal, a former Punjab Chief Minister who wanted to head the new government, apparently refused to join the Cabinet. This could cause friction in the future.

Tight security is being maintained throughout the state. But one person was killed and three injured yesterday in a minor clash in a village south of Amritsar between two groups of Sikhs.

## Chinese party elder criticises 'deviation'

BY ROBERT THOMSON IN PEKING

TWO CRITICAL speeches in recent days by Chen Yun, an elderly and conservative ideologue who is a senior member of the Politburo, have divided analysts over the unity of China's leadership.

Mr Chen apparently would like a more Marxist approach than has been designed by the Chinese leader, Deng Xiaoping, who recorded several victories at the just-concluded special Communist Party conference.

In a speech published yesterday by the English-language "China Daily," Chen—who is

80, and, under present Chinese standards, should have accepted the party pension—called for efforts to correct "ideological negligence" brought on by the reforms.

The elderly official, wearing his cap as first secretary of the Communist Party's central commission for discipline inspection, warned that unless "serious attention" was given to cultural, moral and political development, China would "deviate from Marxism and the socialist road."

He went on to berate party and government officials who

have embarked on business ventures, and who have worked "hand in glove with law-breakers and lawless foreign businessmen." The reference to "lawless foreign businessmen" has caused disquiet among the foreign community here.

The "bourgeois decadent ideology of putting money above all else is seriously disrupting social conduct," Chen said, and "we must mobilise and organise the whole party to fight against these things with thoroughness to wipe out evil."

Chen, who was labelled a "top capitalist reader" during the

Cultural Revolution is renowned as a tough-talker, which is one of the reasons why has been put in charge of party discipline. But his criticism of China's direction has rarely been so trenchant, and his direction to "mobilise" has been interpreted by some diplomats as a rallying call.

At the close of a special party conference last week, he condemned "blindly" following market forces, criticised the country's media for exaggerating peasant prosperity, and said "no individual should try

to have the final say," which has been taken as a criticism of Deng, the country's paramount leader.

While some diplomats argue that the speeches signify a "split" in the leadership over the reforms, others say that the party conference speech was generally supportive of reform policy, and reflect concerns of many within the party. Even the latter admit that the speeches reflect the presence of a more conservative and more ideological grouping within the leadership.

## Buthelezi attacks ANC calls for violence

BY ANTONY ROBINSON IN JOHANNESBURG

LONG-STANDING rivalry between the Zulu-dominated Inkatha Movement, led by Chief Buthelezi, and the exiled African National Congress (ANC) came to a head over the weekend when Chief Buthelezi lashed out at the ANC and called on blacks to support Inkatha's policy of a negotiated settlement for South Africa's future.

Addressing a crowd of around 10,000 Zulus at the traditional Shaka Day rally, at Umlazi near Durban, Chief Buthelezi taunted the ANC with having failed to launch a

successful armed struggle against white power and of opting instead for a policy which would "turn black brother against black brother."

"Our youths are being exhorted to attack their elders. Blacks are stoning blacks, burning them alive, hacking them to pieces and the ANC in exile regards this as a great surge forward in the struggle," he said, quoting liberally from ANC broadcasts beamed into South Africa from abroad. He attacked Mr Oliver Tambo, the ANC leader personally and accused him of "sowing the

seeds of civil war" and "dictating to us from the safety of foreign flags."

Chief Buthelezi repeated his long-held conviction that the ANC in exile has no mandate from ordinary black South Africans to escalate black on black violence or conduct an armed struggle against the Government. He accused the ANC of plotting his assassination.

But as the chief called for the people to renew his own mandate for continuing peaceful negotiations with whites and other groups, a detachment

of alleged Inkatha supporters left the stadium and burst into the nearby township of Lamontville, which is a stronghold of the rival United Democratic Front. A total of six people are reported to have been killed in the ensuing violence, with one man burnt to death.

Meanwhile, further indications of the Government's own reform intentions are expected to emerge tonight when President P. W. Botha makes the opening speech at the Cape Province Congress on the ruling National Party in Port Elizabeth.

## Howe seeks common ground over sanctions

BRITAIN remains opposed to mandatory economic sanctions against South Africa but will seek common ground with other Commonwealth nations when the issue is discussed at a meeting in the Bahamas next month. Sir Geoffrey Howe, Britain's Foreign Secretary, said yesterday, Hunter reports from Ottawa.

Sir Geoffrey said there is unanimity among Commonwealth nations on the need for an end to the South African policy of racial segregation but that each country must decide for itself how best to achieve that goal.

He made the comments to reporters after a day of talks with Mr Brian Mulroney, the Prime Minister, and Mr Joe Clark, the External Affairs Minister.

## Sierra Leone set to elect army chief as president

BY PETER BLACKBURN IN ARIDIAN

SIERRA LEONE appears set for a peaceful political change-over when it elects a new leader tomorrow to succeed President Siaka Stevens, 80, who is stepping down after ruling the West African country for 17 years.

The single candidate, proposed by the sole political party, the All People's Congress (APC), is the armed forces commander Maj Gen Joseph Momoh, 48.

Gen Momoh was unanimously nominated at an APC convention in Freetown last August ending a long period of uncertainty and political infighting. Since then he has received an enthusiastic reception while campaigning around the country.

Although the official APC candidate, Gen Momoh is regarded as an outsider and

free of the corruption and intrigue that has discredited the party. As a devout Christian from the north and of mixed tribal background he also has an acceptable political profile.

The nomination is seen by political observers as a shrewd move by President Stevens to pre-empt a possible coup by junior army officers and to provide some guarantee of a peaceful retirement in his newly built palace on Freetown's Jubba Hill.

Gen Momoh has said that he aims to restore discipline and political accountability in a country where corruption is epidemic even by West African standards. Most of Sierra Leone's diamond and gold exports are smuggled out of the country and 80 per cent of imports are financed through the black market.

## Coups attempt in Khartoum leaves 162 under arrest

BY JOHN MURRAY BROWN IN KHARTOUM

AN unsuccessful coup attempt last week in the Sudanese capital Khartoum now appears to have been a more serious threat to the Government of Gen Sadiq al-Mahdawi, than was at first suspected.

In a statement broadcast on state radio, the Prime Minister Mr Ghazal Dabbash accused a group of southern civilians and military men of plotting to assassinate members of the ruling Military Council and the civilian Cabinet.

So far 162 people have been arrested in connection with the incident, Gen Osman Abdullah, the Defence Minister, said yesterday. One junior officer was killed and six soldiers and a civilian wounded during the abortive coup attempt.

A night curfew has been imposed in the capital. Among those arrested is a prominent

southern politician Mr Philip Abbas Ghaboush. He is well-known as a supporter of the southern rebel leader Col John Garang. Col Garang and his Libyan-backed Sudanese People's Liberation Army (SPLA) have been fighting a two-year civil war with the authorities, and all attempts by the new Government to negotiate with the guerrilla leader have come to nothing.

A rapprochement with Libya in June was an attempt to contain the activities of the SPLA which had received much backing from Libya, including arms funnelled through Ethiopia.

In a related incident at a meeting at the UN in New York Mr Ibrahim Ayub, the Sudanese Foreign Minister, appealed to President Mubarak of Egypt to mediate in talks with Col Garang.

## FINANCIAL TIMES

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## OVERSEAS NEWS

## Mexican Cabinet meets as homeless protest over aid

BY DAVID GARDNER IN MEXICO CITY

THE FULL Mexican Cabinet met over the weekend, for the first time since the two earthquakes that devastated central areas of Mexico City 10 days ago, to hammer out a major reconstruction programme for the capital and badly-hit Pacific coastal areas.

The rubble-strewn capital also saw the first demonstrations organised by the thousands of Mexicans left homeless in protest at government slowness in distributing aid to them.

Details of the Cabinet meeting, which began on Saturday night, were not expected to emerge until late yesterday, but the Government was believed to be considering proposals to relocate several ministries—though not necessarily the five destroyed by the quakes—out of Mexico City.

The costs of the earthquake damage have yet to be officially calculated, but a leading private sector organisation yesterday estimated them to be at least \$5bn (\$3.57bn).

Concomitant with the trading company employers' organisation, said that in addition to the cost of replacing ruined buildings, Mexico could lose half its tourist earnings, or \$1bn, as a result of damage to hotels and fear of further earthquakes. Reconstruction costs would have to be met largely through external financing, Concomin told Excelsior, the Mexico City daily, since increased government spending or higher taxes would be dangerously inflationary. A renegotiation of Mexico's \$98bn foreign debt would thus be necessary.

Concomin's sister organisation, Canacindra, which represents industrial employers, last week called for the write-off of one year's interest payments on the debt, amounting to \$12bn-\$13bn. Both organisations tend to keep broadly in line with, if not reflect, the Government's economic thinking.

Demonstrations against government handling of aid distribution began on Friday night, led by residents from two of the worst hit areas—Tlatelolco, near the Foreign Ministry, where a 19-storey estate has been partially collapsed crushing an estimated 2,000 people, and the devastated Tepito area near the national palace, the centre of Mexico's black market.

Few survivors are being rescued from the rubble, and another tremor on Friday night, registering 5.5 on the Richter scale, has further hampered relief work at some sites. The authorities say 5,600 died in the disaster, but a final toll of 8,000-10,000 is likely.

## Stockman says U.S. 'joy ride is over'

By Nancy Dunne in Washington

MR DAVID STOCKMAN, the former U.S. budget director, yesterday warned that "the joy ride is over" for the U.S. economy and said a \$100bn tax increase is needed "to restore any semblance of fiscal discipline."

Mr Stockman, whose frankness often got him into difficulty in his five years as budget director, spoke even more openly in a television interview about "traumatic economic dislocation."

"It is not a depression in the classic sense when the economy grinds to a halt across the board," he said. "I think it is close to a depression in a selective sense."

If a government cannot pay its bills it ends up with high real interest rates which affect "anyone who makes their livelihood in tradable goods in the world market place," he said.

Ultimately, by seeking "short run palliatives" like the Group of Five attempt to weaken the dollar, global inflation will result. This, said Mr Stockman, is unfortunate since "the solid legacy" of the Reagan Administration was to bring inflation out of the economy.

Mr Stockman blamed both Republicans and Democrats for "the breakdown of responsibility." He called for "a huge national belt tightening... a period of national sacrifice in which people would give up things equally."

## Levesque steps down as Quebec premier

By Robert Gibbons in Montreal

Premier Rene Levesque, 63, has finally stepped down from leadership of the ruling Parti Quebecois and about 140,000 party members across the province were widely expected to elect Mr Pierre Marc Johnson, 39, as his successor yesterday.

In a dramatic farewell in Montreal, Mr Levesque, who founded the separatist PQ from a disparate group of separatist parties in the late 60s, said the ideal of independence for Quebec should not be forgotten even if jobs and the economy are the prime concerns today.

Late polls gave Mr Johnson, son of the late Union Nationale premier, Daniel Johnson, and Minister of Justice and Intergovernmental Affairs, almost 60 per cent of the votes in the leadership election. The runner-up is likely to be Mr Pauline Marois, Manpower Minister.

The PQ polled its membership to choose the new leader, and about 140,000 members, were eligible to vote in 750 polling points across the province. If no candidate wins 50.1 per cent of the vote, a second ballot will be held on October 6.

## Noumea loyalists win most seats

BY DAVID HOUSEGO IN PARIS

ELECTION RESULTS in the French territory of New Caledonia yesterday showed a widening gulf on the South Pacific islands between those favouring independence and those against.

The Melanesian independence movement the FLNKS won most seats in three out of four of the island's regions. But a majority in the new assembly for the territory went to the French loyalist movement the RPRC which won control in the southern region around Noumea, the capital, which has the largest concentration of people and hence the most seats.

The FLNKS, which wants a rapid shift to independence, won 16 of the 46 seats in the new assembly. But under the new voting system introduced by the French Socialist Govern-

ment which allowed each of the regions to poll separately, it none the less gained a majority of seats in the northern and central regions, and the islands of Loyale.

The loyalist RPRC, which wants New Caledonia to remain part of France, won 28 seats in the assembly. But it only gained a majority in the southern region round the capital where the French settler population is concentrated.

Squeezed between these two extremes were the moderate movements such as the LKS which had emphasised the need for the communities to work together but which only won one seat. By contrast the more racist National Front won three seats in the new assembly. Total population of New Caledonia is around 150,000,

dominated by 82,000 Kanaks and 50,000 European settlers.

Though the results were not a surprise, they underline the difficult problem that any French administration will have in finding a durable political settlement for the islands.

The risk is now that the FLNKS will return to guerrilla action feeling that the size of the white population deprives them of any hope of an orderly move to independence. The French right-wing opposition parties have said that if they are returned to power in France in March—as seems likely—they will call a referendum on the islands' future. On the basis of yesterday's election this would have given a majority to the loyalist movement which wants the territory to remain part of France.

A break down of the poll shows that the FLNKS gained 28 per cent of the vote, the more moderate independence movements 10 per cent, but the loyalist parties (the RPRC plus the National Front) 60 per cent.

The Government was none the less comforting itself yesterday that the election had passed off peacefully in contrast to the last election in November 1984 which was boycotted by the FLNKS and which produced virtual civil war soon afterwards. Some 3,000 French police were flown out to New Caledonia for yesterday's poll.

M. Jacques Lafleur, a leader of the loyalist RPRC, none the less described the result as "cooked" for giving his party control of only one region even though it had won 53 per cent of the vote.

## Fighting rages in Lebanese port city

By Nora Boustany in Beirut

A SYRIAN-BACKED offensive by leftist militias against Moslem fundamentalist fighters holed up in the northern port city of Tripoli went into its second day yesterday, but failed to make any major advances.

Communications with Tripoli were cut soon after militants of local parties affiliated with Syria closed in on the city in a pre-dawn assault Saturday following a barrage of artillery and rockets from the surrounding Syrian-held hills. There were conflicting reports about active Syrian involvement in the fighting.

The battle for control of Tripoli between elements of the Tawheed, or the Islamic Unification Movement and the pro-Syrian Arab Democratic Party has led to a casualty toll of 220 dead and 1,000 injured. Thousands of fighters from the pro-Syrian Ba'ath Party, the National Syrian Social Party, and the Lebanese Communists Party sealed off the approaches to Tripoli over the last two days but fell short of charging through Tawheed defenses. Tawheed chieftain, Sheikh Saeed Chaaban, vowed in a statement from his bunker Saturday that his men would "be the last to lay down their arms."

Two thirds of Tripoli's population of 750,000 fled the town, Mr Yasser Arafat, the Palestine Liberation Organisation chief, appealed to the Arab League and the Islamic Conference Organisation to "rise up and come to the rescue of Tripoli." Syria has accused Shaikh Chaaban of collaborating closely with the PLO leader and receiving arms shipments from his guerrilla organisation. Syria has 40,000 troops in northern and central Lebanon.

## Greenpeace 'warriors' closing in on test site

BY MICHAEL THOMPSON-NOEL IN SYDNEY

RAISED FROM its watery grave, the Rainbow Warrior lay alongside an Auckland wharf yesterday, a rusting monument to a tale of French folly on the grandest scale.

In bright sunshine, sightseers stood gazing at the bedraggled Greenpeace protest vessel that was sunk by French secret agents in Auckland harbour on July 10, killing a Greenpeace photographer.

Many visitors paid a dollar or two for protest postcards and badges, and most were loudly critical of an incident that Mr David Lange, the New Zealand Prime Minister, has described as a sordid act of terrorism.

Mr Dave Cadell, a director of Auckland's Cook Cruises, said: "The French made a big mistake in underestimating New Zealand's police. The Kiwi cops are the most tenacious in the world. They'll go anywhere, spend

anything, to track something down."

Today marine assessors will examine the vessel, which was not insured. Mr Atholvon Koettitz, a Greenpeace engineer from London, says damage is extensive. The ship's likeliest fate is to be towed away for scrap.

Meanwhile, the flotilla of protest vessels converging on Moruroa Atoll, the site of French nuclear testing in the South Pacific, is making good speed, and is determined to give the French a run, even without the Warrior.

"The whole idea is to spread around the atoll, and stretch the French a bit," said Mr Rien Achterberg, Greenpeace's Dutch-born Pacific peace flotilla co-ordinator.

The Vega, a 34-foot Greenpeace ketch with a crew of five, is just outside the atoll's 12-mile exclusion zone, shadowed by a

French naval vessel.

The Vega was handed a note last week, reminding its crew not to breach the 12-mile barrier. If the flotilla ignores this advice, a major confrontation is assured.

The Greenpeace, an 880-ton tugboat with 19 crew, mostly British, that will service the flotilla, is now about 1,200 miles, or six days, away.

Two other vessels are between five and seven days from the atoll, while the Varangian, a yacht, left Auckland at the weekend and will take three to five weeks.

The crew of the Vega includes a 61-year-old Maori elder from New Zealand who has never been to sea before.

Mr Achterberg was non-committal about whether the protest flotilla would attempt to breach the exclusion zone and sail close to the atoll.

"We had thought a spectacular nuclear test was due imminently," he said. "Perhaps we're delaying them. We hope to stay there as long as possible, at least until the hurricane season starts, sometime in November."

"The nearest friendly places are not very close. There's Pitcairn, which has water but no shelter, or the Cook Islands, 1,200 miles from Moruroa. There's French Polynesia, but it wouldn't be much use putting in there, except for water."

Although there is full-hearted support within New Zealand for Mr Lange's tough stand with Paris on the sinking of the Rainbow Warrior, there is growing concern over the New Zealand Government's ban on port visits by nuclear-armed or powered ships, which is badly straining relations with the United States.

## Panama changes president after less than a year

PANAMA'S new president Sr Eric Arturo del Valle, sworn in at the weekend after his predecessor resigned, said the Central American nation faced "one of the most difficult times in its history," Reuters reports from Panama City.

His predecessor Sr Nicolas Ardito Barletta resigned on Saturday after less than a year in office, saying he had lost the support of the armed forces. Sr del Valle, 54, an industrialist with large sugar interests who was vice-president under Sr Ardito Barletta, said the previous government lacked firmness and consistency. Panama

had fallen into a social, political and economic "whirlpool," he said at his swearing-in ceremony.

Sr Ardito Barletta's resignation capped two days of widespread rumours of a military coup after he had pledged to order an independent inquiry into the murder earlier this month of a leading critic of the military.

The former World Bank vice-president took office last October after a water-tight victory as the military's candidate in May elections. The opposition said the polls had been rigged.

## Disagreement over Sweden's economic strategy

BY DAVID BROWN IN STOCKHOLM

SERIOUS DIFFERENCES between Sweden's Central Bank and Finance Ministry over the country's post-election economic strategy emerged at the weekend, following calls by Mr Bengt Dennis, the Riksbank chairman, for harsh measures to curb private consumption.

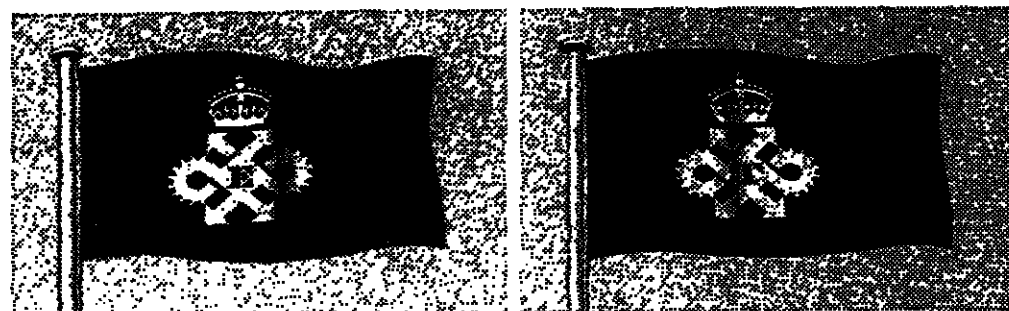
Mr Kjell-Olaf Feldt, the Finance Minister, rejected as "entirely inappropriate" Mr Dennis's call for immediate cuts in government grants to both households and municipalities, in order to dampen domestic demand and help improve Sweden's deteriorating external payments position.

He reiterated the Social Democratic administration's

view that low wage cost increases in the forthcoming pay negotiations are the priority in bringing down the rate of inflation, still one of Europe's highest.

The rapid deterioration of Sweden's external payments position is one of the most pressing problems on the economic agenda following the Social Democrats' re-election last week.

With imports rising faster than exports, due to both high private consumption and a big jump in industrial investment, the country has accumulated a deficit of SKr 12.9bn on the current account of the balance of payments in the first seven months.



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The Queen's Awards are presented annually to companies that have achieved outstanding success in exports or technology. Or both.

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Name \_\_\_\_\_

Name of Company \_\_\_\_\_

Address \_\_\_\_\_

(tick as appropriate) Exports ☐ Technology ☐ Both ☐

Completed applications must be received by October 31st 1985.

The Queen's Awards 1986. FTB

Who's behind the biggest consumer brand names in Hong Kong?

WORLD TRADE NEWS

Semiconductor sales 'set to rise'

BY LOUISE KEHOE IN SAN FRANCISCO

THE WORLD semiconductor industry will make a dramatic recovery next year, according to the Semiconductor Industry Association. It predicts sales will grow 18 per cent worldwide in 1986 and be worth \$25.5bn (£18.2bn). That would be almost as high as the record sales of \$26bn in 1984.

"We believe that the 1985 recession, brought on by dramatic inventory excesses and equally dramatic price declines, will be reversed in 1986," said Dr Gilbert Amelio, president of Rockwell International's semiconductor products division, presenting the SIA's annual forecast in San Francisco.

Sales of semiconductor chips in the U.S. are expected to increase 24.5 per cent to

WORLD-WIDE SEMICONDUCTOR SALES		
Year	(\$bn)	% change
1982	14.1	
1983	17.3	+24.3
1984	26.3	+46
1985	21.6*	-17
1986	25.5*	+18
1987	31.4*	+23
1988	38.4*	+23

Source: SIA

Japanese sales are expected to rise 16.4 per cent to \$13.3bn, reversing the 1985 6.4 per cent decline.

While agreeing that the semiconductor industry recession has hit bottom, most industry representatives attending the annual forecast meeting thought the SIA predictions "over optimistic."

"We are an optimistic bunch and we tend, I believe, to forecast optimistically. But I think there's reason to believe in the accuracy of this year's forecast," Mr Amelio said.

However, SIA president Mr Tom Hinkelmann acknowledged that in the past the group's forecasts have been "remarkably inaccurate." Last year the SIA predicted chip sales would grow

22 per cent worldwide in 1985. Sales are now predicted to have fallen 17 per cent.

The outlook for solving the Japanese trade problem is less rosy, SIA directors said.

In June the SIA, on behalf of the U.S. semiconductor industry, took legal action under section 301 of U.S. trade laws, calling on President Reagan to put pressure on the Japanese government to open its markets.

Dr Robert Noyce, vice-chairman of Intel, blamed the high value of the U.S. dollar for much of the semiconductor industry's problems. "I don't think that unfair trade practices have escalated (in Japan) enough in the last five years to account for the mounting trade deficit," he said.

Vickers tank shown to Egyptian army chiefs

By Trevor Moxley and Tony Walker in Cairo

VICKERS Defence Systems, of the UK late last week demonstrated its prototype Mark-7 battle tank before Egypt's military chiefs as part of a renewed British defence sales drive here.

The recent visit to Cairo by Mrs Margaret Thatcher, UK Premier, during which she had talks with Field Marshal Abu Ghazala, Egypt's Defence Minister, is seen as a useful contribution to a revitalised sales effort.

Egypt "agreed" earlier this year on terms for a \$150m Export Credits Guarantee Department-backed credit for defence purchases. London had previously offered \$200m but this arrangement effectively lapsed because Egypt did not take advantage of it.

A number of British companies, including Rolls-Royce, are at an advanced stage in negotiations for the supply of equipment and technical assistance to Egypt's fledgling defence industry which last year exported an estimated \$700m-worth of arms and ammunition, much of it to Iraq.

Egypt has made production of its own battle tank a priority, but defence experts say it will be some time before Egyptians have the capacity to manufacture such a sophisticated piece of equipment.

The Vickers M-7, which underwent mobility and fire-power tests in the desert near Cairo, combines the Vickers turret and gun and Chobham armour with the West German transmission and engine. Lt Gen. Fouad Oraby, commander-in-chief of the Egyptian armed forces, was among those who witnessed the test.

Egypt has debated the choice of tanks suitable both for its own use and for export to neighbouring countries for some years and various models have been considered. Other contenders for the Egyptian market are the Italian Ot Moletra OT-40 and the Brazilian Engesa's Onorio.

Egypt has in service three Soviet model tanks—the T54, T55 and T62—plus the U.S. M-60, deliveries of which are continuing.

SHIPPING REPORT  
Dry cargo freight rates rise sharply

By Andrew Fisher, Shipping Correspondent

DRY CARGO freight rates rose sharply last week, while the tanker market suffered from confusion because of the disruption of supplies from Iraq's Khargh oil terminal, after it was hit by Iraq.

Both on the Atlantic and in the Far East, said shipbroker Denholm Coates, rates for Panamax ships of 60-80,000 dwt showed "a remarkable acceleration."

The key grain rates from the U.S. Gulf to Europe and Japan rose respectively to \$8.05 (£5.75) a ton (up 35 cents in a week) and \$12.95 (up more than \$2).

Soviet chartering of bulk carriers for between two and 10 months could be responsible for some of the split. Coal and iron ore rates also rose. Vessels of 50-100,000 dwt were the major beneficiaries but there were signs of higher levels for smaller ships.

Tanker business from the Gulf was poor, especially for large vessels. Fixtures included a 210,000 ton cargo to Taiwan at Worldscale 30, little change over previous rates.

Confusion has been caused by some bankers apparently continuing to load from Khargh despite the Iraqi damage.

In the long term, large tanker rates should benefit from the removal of a further sizeable amount of tonnage this year through scrapping. More than 19m dwt of tankers and combination carriers (able to carry oil or dry cargoes) were sold for scrap in the first eight months

Mulroney takes cautious line on U.S. trade pact

BY BERNARD SIMON IN TORONTO

AN ANNOUNCEMENT by Mr Brian Mulroney, the Canadian Prime Minister, that Canada plans to seek a comprehensive trade accord with the U.S. marks the first cautious steps down a path strewn with uncertainties for the Ottawa Government and for the country's business community.



Mulroney: cautious

The intention to negotiate, in Mr Mulroney's vague phrase, "the broadest possible reduction in tariff and non-tariff barriers" between the world's largest pair of trading partners has been widely welcomed in Canadian business circles.

About 2m Canadian jobs depend on trade with the U.S. A recent study concluded that free trade between the two could add up to 8 per cent of Canada's gross national product. But no one—not even the government—appears sure what Mr Mulroney's initiative will lead to.

Mr David Peterson, Ontario's Premier, who is urging a more cautious line, set up by the Department of External Affairs to handle the talks: "The ball is in the U.S. court. They have to decide whether they're interested or not."

The first steps towards the negotiating table are thus hesitant ones. Mr Mulroney has asked President Reagan merely "to explore with Congress their interest in pursuing these negotiations."

Only then will "exploratory talks" be held on what each side aims to achieve in full negotiations. The Canadians

of withdrawing if free trade becomes a hot political issue at home as a result of the U.S. demanding more than Canada is prepared to give.

According to an official in the special committee of inquiry set up by the Department of External Affairs to handle the talks: "The ball is in the U.S. court. They have to decide whether they're interested or not."

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Only then will "exploratory talks" be held on what each side aims to achieve in full negotiations. The Canadians

expect the process will last at least two years.

Meanwhile, they are hedging their bets. Cabinet ministers have carefully avoided any reference to free trade. They have made it clear that Canada is unwilling to include the 1965 agreement on automotive trade (the so-called Autopact) in its discussions.

Nor will they allow the Americans to pick over Canada's generous social security system or regional development incentives, which have been criticised as unfair subsidies on Canadian exports.

The Autopact includes provisions assuring continued U.S. investment in the Canadian motor industry. Just a few years ago, serious doubts were expressed about the benefits of the agreement to Canada, but the questions have faded since Canada began notching up a large surplus in automotive trade with the U.S., totalling more than C\$4bn (£2.05bn) last year.

While President Reagan seeks Congress's agreement to make Canada a special case in the current protectionist climate, the Ottawa Government will continue consultations with business, labour and—perhaps most important—the provinces.

Opposition from influential sections within all these groups to lower trade barriers has already surfaced. Their fears centre on the advantage that U.S. producers enjoy as a result of lower labour costs, less government intervention in business and even lower interest rates.

Yeutter sounds out opinions

MR CLAYTON YEUTTER, the U.S. Trade Representative, is preparing a report on his consultations with key committees in the House of Representatives and Senate and with American business interests on proposed liberalised trade talks between the U.S. and Canada. Nancy Dunne in Washington writes.

President Reagan and Mr Yeutter last week issued statements welcoming Canadian Premier Brian Mulroney's proposal to open bilateral talks on reducing tariff and non-tariff

barriers.

Canada is the U.S.'s largest trading partner accounting for nearly one-fifth of its total exports. Canada's exports to the U.S. constitute nearly one-third of the country's gross national product and 75 per cent of its foreign sales.

Mr Yeutter said "Significant barriers to U.S. exports of goods and services in a number of sectors exist in Canada. The barrier includes: high tariffs across a wide spectrum of products; non-tariff barriers,

like government procurement clauses at both federal and provincial level; obstacles to U.S. investment; and federal and provincial regulations, like those on banking, which impede U.S. exports of services.

Besides consulting with the House Ways and Means Committee and the Senate Finance Committee, Mr Yeutter will seek the advice of the U.S. International Trade Commission, hold public hearings and consult with a private sector advisory committee.

Chinese gas project aims for 1989 production

By Robert Thomson in Peking

A \$500M (£357M) CHINA-U.S. joint venture to develop a South China Sea gas field is aiming for production from the site to begin in 1989 and to be producing 3.25bn cubic metres of natural gas annually by 1992, China's Xinhua news agency said yesterday.

The agency disclosed these details to coincide with the expected signing yesterday between the Atlantic Richfield Company (Arco), Santa Fe Minerals Asia and the China National Offshore Oil Corporation.

The contract, one of the largest foreign investment deals under China's open door policy, covers development and production and sale of gas from the field off Hainan Island. A 96 km undersea pipeline will be constructed from the field, known as Yacheng 13-1, to Haikou, from where a pipeline will extend to Guangzhou and the Shenzhen special economic zone.

China is keen to sell gas from the field, which has estimated reserves of more than 90bn cubic metres, to Hong Kong, and Chinese officials have indicated that Qin Wencai, Cnooc president, is likely to visit Hong Kong in December to discuss sales with the Hong Kong and China Gas Company.

Chinese officials have considered using the gas to fuel fertiliser plants and power stations on the energy-short mainland, and Cnooc has already established an office in Guangzhou to market the gas.

The U.S. companies and Cnooc signed a contract to develop the area in September 1982. The first well was drilled in August 1983, striking gas deposits with a daily output of 1.2m cubic metres.

U.S.-Dutch electronics venture wins Saudi order

BY LAURA RAUN IN AMSTERDAM

AT & T-Philips Telecommunications, the U.S.-Dutch joint venture, has received a \$1.7m (£93m) order from American Telephone & Telegraph for satellite communications equipment to be installed in Saudi Arabia.

The order is the first sizeable contract in six months for the joint venture, which specialises in the manufacture of the

digital telephone-exchange switching system.

It includes a frequency division multiplexer and echo suppressor.

The equipment, for telephone and data communications via satellite, will be used for one ArabSat and two Intelsat earth stations in Jeddah which are to go into operation early next year.

World Economic Indicators

		UNEMPLOYMENT			
		August 85	July 85	June 85	August 84
U.S.	'000s	8,127	8,451	8,413	8,401
	%	7.6	7.5	7.3	7.5
UK	'000s	3,240	3,225	3,179	3,116
	%	13.4	13.4	13.1	12.1
W. Germany	'000s	2,221	2,160	2,193	2,282
	%	8.2	8.0	8.1	8.2
France	'000s	2,259	2,223	2,283	2,194
	%	9.8	9.6	9.9	9.5
Italy	'000s	2,922	2,985	2,985	2,885
	%	12.9	13.1	12.8	11.7
Belgium	'000s	554.9	505.9	528.5	466.1
	%	13.5	12.3	12.8	14.7
Netherlands	'000s	760.8	737.9	737.0	818.4
	%	12.4	12.2	12.1	14.1
Japan	'000s	1,530	1,530	1,370	1,430
	%	2.60	2.54	2.44	2.78

Source (except U.S., UK, Japan): Eurostat

Republic of South Africa

U.S.\$75,000,000  
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The Rate of Interest applicable to the Interest Period from September 30, 1985 to March 26, 1986, inclusive, will be determined by Dresdner Bank AG (London Branch) as Reference Agent to

be 8% per cent per annum. Thereafter, interest per annum of U.S.\$10,000 principal amount is due on March 27, 1986, the relevant interest period, in the amount of U.S.\$414.10.

Dresdner Bank  
Aktiengesellschaft  
Principal Paying Agent  
Frankfurt am Main, in September 1985

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**ANDRÉ MARTIN (French)**  
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**RODNEY JACKSON (British)**  
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**MILAN MIRKOVIC (Australian)**  
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**SEYMOUR MELMAN (American)**  
An exploration of methods to convert industrial economies from military to civilian work.



**THEAN SOO TEE (Malaysian)**  
Cultivating asparagus plants on Mt. Kinabalu to inhibit soil erosion and yield a high-value crop for local farmers.

**MARTINE FETTWIS-VIENOT (Belgian)**  
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**DONALD PERRY (American)**  
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**KENNETH HANKINSON (British)**  
A thorough biological and geological survey of the unexplored Brabant Island in Antarctica.

**MICHEL TERRASSE (French)**  
Repopulating the Massif Central area of France with the Griffon vulture, following its extermination.

The Rolex Awards for Enterprise were inaugurated in 1976 with a single aim: "To encourage the spirit of enterprise in individuals throughout the world by acknowledging outstanding personal efforts or contributions made in selected categories of human endeavour."

The qualities that the Awards set out to honour are the very ones that have long been shown by Rolex and by Rolex owners.

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Projects may be submitted in one of three categories: Applied Sciences and Invention; Exploration and Discovery; The Environment. Within these three broad categories, the Selection Committee will be looking for projects which display a spirit of enterprise together with the qualities of originality and likelihood of realisation.

The accompanying brief descriptions of winning projects from earlier years demonstrate the kind of enterprise that has impressed previous Selection Committees. The members of the current committee, listed here, are equally distinguished and will be applying the same criteria.

If your scheme falls outside the committee's

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A hardback book about the Awards will be published, entitled "Spirit of Enterprise - The 1987 Rolex Awards," richly illustrated in colour. It will contain details of some of the best and most fascinating, stimulating and challenging ideas submitted by men and women throughout the world. The publicity given to projects by previous editions has often led to additional support from a wide range of sources.

## HOW TO APPLY.

Your entry must be submitted in English on an

official application form and reach the Secretariat before 31st March 1986.

To obtain an official application form for the 1987 Rolex Awards for Enterprise, together with the rules and conditions for entry, write to: The Secretariat, The Rolex Awards for Enterprise, P.O. Box 178, 1211 Geneva 26, Switzerland.

The Awards will be presented to the laureates in Geneva at the end of April 1987.

If you possess originality, imagination and initiative, you will not let this opportunity pass you by.

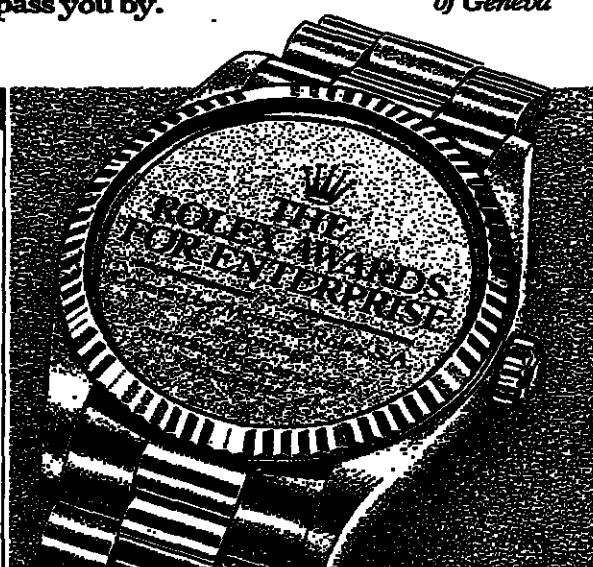
**ROLEX**  
of Geneva

## THE 1987 SELECTION COMMITTEE

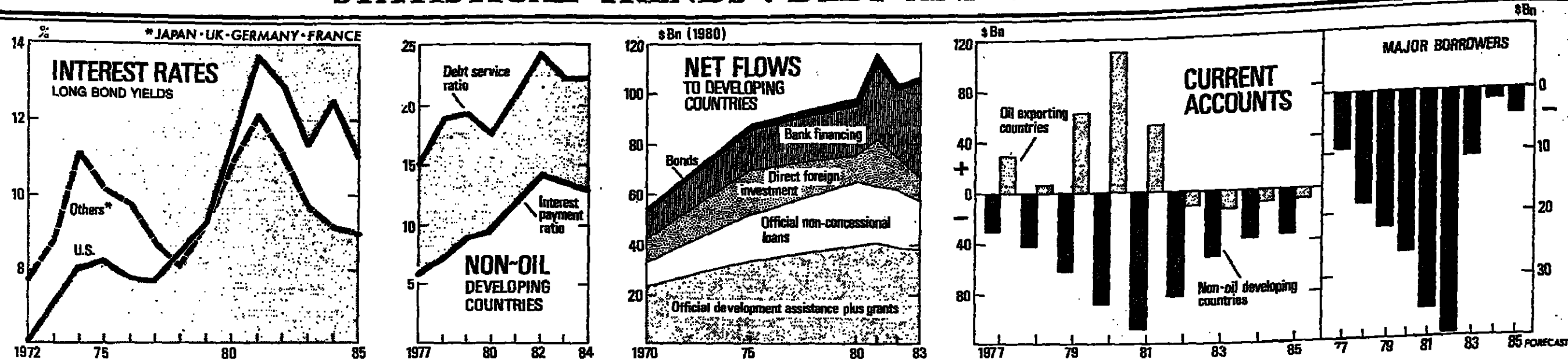
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Mr. Hans Joachim Panitz (FRG), Telecommunications engineer. Payload Operations Manager at the German Aerospace Establishment - DLR, Cologne.  
Professor Carlo Rubbia (Italy), Physicist and 1984 Nobel Laureate. Project Spokesman at the CERN (European Laboratory for Particle Physics).  
Mr. Robert Stenun (Belgium), Underwater archaeologist and author.



## STATISTICAL TRENDS : DEBT AND FINANCING



## A question of interest as crisis cools

SEVERAL YEARS of debt re-scheduling have taken much of the heat off the world's debt crisis but interest payments on debt remain a problem.

The debt crisis of the early 1980s followed a doubling in the flows of capital to the developing countries between 1970 and 1981. Lending by commercial banks increased four-fold, taking their share of new flows to 30 per cent.

This increased the exposure of the developing countries to fluctuations in the market rate of interest and made the international banking system more sensitive to shocks in the world economy.

The debt of non-oil developing countries climbed rapidly to reach \$750bn by 1982, and the debt service ratio (debt service payments as a proportion of exports of goods and services) rose from around 15 per cent in the mid-70s to 24.6 per cent.

The recession in the world economy which started after the oil price shock of 1973, hit the non-oil developing countries. World trade

fell in volume and non-oil dollar commodity prices fell by 25 per cent between 1980 and 1982.

Interest rates increased substantially in nominal and real terms.

Their current account deficits rose to \$110bn in 1981 and the financing requirement (current account plus capital outflows) shot up to \$150bn. A total of \$84bn had to be borrowed from private creditors.

The squeeze on financing forced a substantial cut in imports and loss of output leading to a series of debt re-schedulings.

The turnaround in the world economy since 1982 has brought some relief. Export volumes increased by 11 per cent in 1984, and imports which fell in volume by 8 per cent in 1981-83 rose 6 per cent in 1984.

The current account deficit of the non-oil developing countries fell substantially to \$68bn in 1984 and the financing requirement at \$47bn was almost entirely matched by net exports and long-term borrowing from official creditors.

For the major borrowers' the fall in the current account deficit was even more dramatic from \$40bn in 1982 to \$1.5bn in 1984. Re-scheduling has reduced the amount of short-term debt by \$30bn and the debt service ratio has fallen from 24.6 per cent to 22.5 per cent, but it remains high.

The interest payment ratio has fallen slightly from 14.3 per cent to 13 per cent—many re-scheduling arrangements do not re-schedule the interest element of the loan. Interest payments now account for 80 per cent of debt service payments.

Although interest rates have eased from the peak levels of 1981 they remain high with the continued need for deficit funding, particularly in the US. Thus the interest payment ratio is unlikely to fall in 1985. This is against the background of slower economic growth in the world economy and weakening commodity prices.

The oil-exporting countries' substantial current account surpluses of 1979-80 have be-

come deficits as the oil price has plummeted and their market share has fallen. There was a consequent increase in net borrowing to around \$20bn in 1983-84.

The cumulative current account of the richer countries is still well in surplus, but that of the poorer OPEC countries is estimated to have gone into deficit in 1985.

In the industrialised countries government deficits as a percentage of GDP increased in the 1970s and early 1980s before easing back in some countries following tighter fiscal policies.

However, the effect of the public debt size (55 per cent of GDP for the EEC as a group) and the increase in interest rates on that debt, caused interest payments as a proportion of GDP to rise sharply to an average of 5 per cent for the EEC. In 1985 debt interest payments could exceed net borrowing in several European countries.

\*Argentina, Indonesia, Mexico, Venezuela, Brazil, Korea, Philippines.

EXTERNAL DEBT \$bn

	Non-Oil Developing Countries		MAJOR BORROWERS*	
	Short Term	Long Term	Short Term	Long Term
77	63	289	28	103
78	72	327	33	127
79	82	389	43	149
80	113	452	66	170
81	136	524	82	207
82	155	582	97	228
83	137	553	77	215
84	126	701	66	282

\* Argentina, Indonesia, Mexico, Venezuela, Brazil, Korea, Philippines

GENERAL GOVERNMENT FINANCIAL BALANCES

	% GNP/GDP						
	1979	1980	1981	1982	1983	1984	1985*
U.S.	0.6	-1.2	-0.9	-3.8	-4.1	-3.4	-3.7
Germany	-2.7	-3.1	-3.8	-3.8	-2.8	-2.3	-1.5
France	-0.7	+0.2	-1.8	-2.7	-3.1	-2.3	-3.2
UK	-3.2	-3.9	-3.2	-2.3	-3.5	-4.0	-3.6

\* Forecast Source: OECD

DPEC CURRENT ACCOUNT

(Cumulative from 1973)					
	1981	1982	1983	1984	1985*
Rich Opec	335	342	336	329	321
Poor Opec	61	31	11	6	-12

\* Estimated Source: Salomon Bros

INTEREST PAYMENTS

	% GDP				
	1970	1975	1979	1983	1984
U.S.	2.2	2.5	2.3	4.6	4.9
Japan	0.5	3.7	2.7	3.2	4.3
W. Germany	1.0	1.4	1.7	3.0	3.0
UK	4.0	4.0	4.5	4.0	4.3

\* Forecast Source: IMF

INDENTED DEVELOPING COUNTRIES

	\$bn						
	1981	1982	1983	1984	1985*	1986*	1987*
Current Account Deficit	113	108	98	38	36	36	36
Capital Outflows	32	32	32	30	9	9	9
Financing Requirement	150	141	79	47	47	47	47
Borrowing from Private Creditors	88	68	27	12	2	2	2

\* Forecast Source: IMF

OECD GNP GROWTH % CHANGE

	1970	U.S.	OECD
		(less U.S.)	
77	4.7	4.2	4.2
78	5.5	2.9	2.9
79	4.7	3.5	3.5
80	2.6	3.8	3.8
81	-0.4	2.2	2.2
82	3.4	1.5	1.5
83	-3.0	0.8	0.8
84	3.7	1.9	1.9
85*	2.5	2.5	2.5

\* Forecast Source: OECD/Philips and Dow

NON-OIL LDC's

	\$bn	
	EXPORTS	IMPORTS
77	219	231
78	226	274
79	311	348
80	407	444
81	513	477
82	586	453
83	589	430
84	421	477
85*	480	452

\* Forecast Source: IMF

EXTERNAL DEBT

	% of exports	
	Developing Countries	Major Borrowers*
77	127	128
78	132	204
79	119	189
80	110	175
81	123	187
82	148	241
83	138	255
84	181	237

\* Argentina, Indonesia, Mexico, Venezuela, Brazil, Korea, Philippines

BIS REPORTING BANKS CHANGES

	US\$ bn	
	Total External Assets	Net International Bank Lending
1979	285	125
80	241	100
81	285	185
82	176	85
83	102	85
84	126	85

Source: BIS

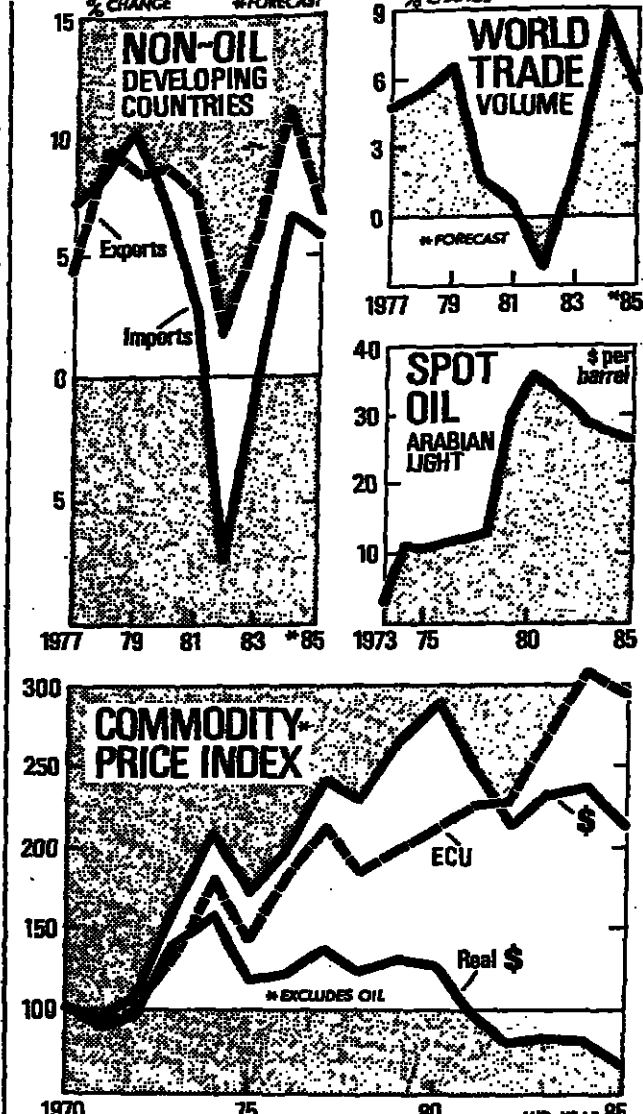
BANK CLAIMS at end 1984

	\$bn
BRAZIL	78
MEXICO	73
KOREA	31
VENEZUELA	28
ARGENTINA	28
CHILE	14
INDONESIA	14
PHILIPPINES	14
MALAYSIA	11

Source: Morgan Guaranty

Commentary by Our Economics

Staff; data analysis by Financial Times Statistics Unit; charts and graphs by Financial Times Charts Department



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## Kinnock urges ballot fund for trade unions

BY JOHN LLOYD, INDUSTRIAL EDITOR

MR NEIL KINNOCK, the Labour leader, has given powerful support to the forces for change within the Trades Union Congress (TUC) by proposing a development fund on which unions could draw finance for ballots, as well as for education and training programmes.

He also went further than he has before in agreeing in a television interview yesterday that a future Labour government would prescribe ballots in law - as the 1984 Trade Union Act presently does. Asked if Labour would give ballots the force of law, Mr Kinnock said: "I think there's no harm at all in that. Indeed, I think there is good reason for that to be sustained in law."

In earlier comments to industrial journalists, he had said: "Compulsory ballots are a source of industrial inflammation," but added that "it would be unthinkable for the Labour Party or a Labour government to diminish the power individual trade unionists can exercise in a trade union."

Mr Kinnock forecast that the TUC would hold a conference on the union's attitude to labour law - a number of leading TUC figures are now pressing for this - and he would welcome such a move.

The ballot issue, which overshadowed the TUC Congress earlier this month, will be revived at least once more this week at the Labour party conference when the executives of the two craft unions committed to taking money for postal ballots - the engineers and the electricians - meet on Wednesday night to determine their future action in light of a TUC general council decision to break off any further applications for state aid for ballots.

It is expected that the engineers' executive will decide to recommend to its 1m members to vote once more for the state aid in a second ballot on the issue in November. The electricians' executive is also expected to reaffirm its decision to take the money once its application for it - subject to lengthy delay - has been approved by the certification officer.

Mr Kinnock described the Government's employment legislation as "conceived in prejudice and applied with malice," but he is now in clear support of an approach to future labour law which incorporates some of the individual balloting rights introduced, in particular, in the 1984 Act.

His approach is echoed in a discussion document launched yesterday



Mr Neil Kinnock

by Mr John Prescott, the party's employment spokesman. The document, Planning for Full Employment, proposes free postage for ballots as in parliamentary elections; and advances the case for a Workers Rights Bill to "extend the democratic rights and freedoms of workers at their place of work."

Mr Kinnock's idea is to establish a Government-financed fund to be placed under the control of the TUC which would provide money for ballots, training, education and union development. A TUC-appointed monitoring committee would be empowered to vet applications for finance from the unions, with the main criterion being that the acceptance of such funds should not compromise the union's independence.

He said that unions not affiliated to the TUC should also be allowed to apply for the funds from the TUC committee - provided they were genuinely independent, and judged to be so by the Government-appointed Certification Officer.

## Labour hears plea for party unity

BY IVOR OWEN AND MARGARET VAN HATTEM

PERILS FACING the Labour Party if it was unable to shed its reputation for disunity and division were underlined by Mr Alan Haddon, the party chairman, in his opening address to Labour's annual conference which opened at Bournemouth yesterday.

He emphasised that the lesson to be drawn from the successive general election defeats in 1979 and 1983 was that it was necessary to earn and restore the loyalty of working people every generation.

Mr Haddon, a leading member of the Amalgamated Society of Boiler-makers, Shipwrights, Blacksmiths and Structural Workers, claimed that Labour had the opportunity to regain public support because the present government had "lost touch with so many people." While political power need not be won at the expense of principle it could not be won without unity.

Mr Haddon said: "We have the leader, we have the parliamentarians, we have the policies. Nothing - no sectarian prejudices, no factional divisions, no personality clashes, no misconceived and selfish private enterprises and no petty differences must deflect us from our task - victory in the next general election."

Mr Haddon maintained that the conference opened with the British people looking to Labour for leadership and for hope. "They look to us because they want a government with a programme for economic recovery to banish mass unemployment."

The British people also look to Labour, he said, because they want a government with a commitment to attack poverty, to halt the crisis in the inner cities and to rebuild the health and social services.

He dismissed the Thatcher Government as a "monetarism-obsessed faction" which did not share the concern of the people about unemployment and the present scale of poverty and inequality.

"This is a government which has created, in unemployment and poverty, mass suffering on a scale no one would have thought possible 20 years ago, 10 years ago, or even six years ago."

Mr Haddon said it was not sufficient for Labour to just oppose unemployment. "We must be for employment. It is not enough to be against unemployment. We must be for employment."

"It is not enough to oppose poverty and inequality. We must be for prosperity and for equality."

The most important thing a Labour government would do would be to reduce the dangers of nuclear war and the immoral and wasteful arms race by stopping British nuclear tests and cancelling the Trident missile system.

Mr Roy Hattersley, Shadow Chancellor of the Exchequer, yesterday launched his own conference week with an appeal to delegates to concentrate on developing a practical, feasible programme for the next Labour government, and not to be sidetracked into minor issues.

Assaults on the party leadership, he said - drawing no distinction between those from outside the party and those from within - came from those who recognised that power was within Labour's grasp.

Mr Hattersley was speaking at a meeting of the Labour Solidarity Campaign, at which Mr Gerald Kaufman, Shadow Home Secretary, appealed to delegates to let their behaviour over the next week be ruled by the need to win the next general election.

"We must all ask ourselves - will what I say and do help Labour win the next election?" he said. "If it's not relevant to a Labour victory, then don't do it, don't say it," he urged.

Labour leaders were yesterday showing some apprehension over the possibility of rows developing on such issues as black sections and the Liverpool council issue, which would influence public perceptions of the conference. The theme of restraint was taken up by Mr Hattersley, who begged delegates to concentrate on the detail of party policy.

"It is the realism - the practicality and sheer common sense of what we propose - that frightens our opponents," he said.

It was this fear that had produced the "hysterical, ignorant and prejudiced" newspaper response last week to his latest economic policy statements. He challenged the editors of four national daily papers - The Daily Express, The Daily Mail, The Sun and The Times - to substantiate their criticisms.

The fact that they had all chosen to attack Labour's policy on the same day and in the same way was no coincidence, he claimed. "Rational observers will conclude that at the word of command from Central Conservative Office various papers clicked their heels and jumped smartly to attention."

## Bank works for quick end to JMB saga

EXACTLY a year ago a team of British bankers was recovering from a night spent checking the books of Johnson Matthey Bankers. Today the troubled bank is being prepared for sale, and after an uncomfortable year in the driving seat, the Bank of England would dearly like to complete this process as quickly as possible and with the minimum of fuss.

What the bankers found was a £300m loan book, three quarters of which was either non-performing - that is, repayments were not being made - or inadequately backed. The central bank's initial review suggested that some £240m - about twice JMB's capital - would have to be provided against possible losses.

Johnson Matthey plc, the bank's parent, was unable to plug the holes and so the rescue was launched. In the rescue package that was put together, the parent chipped in £20m and then for £1 sold JMB to the Bank of England. The central bank put £100m on deposit (now capitalised) and provided a £150m guarantee - half of which was subsequently covered by the clearing banks, accepting houses and members of the gold market through an indemnity agreement.

So JMB was saved and became a subsidiary of the central bank. Under the leadership of Mr Rodney Galpin, who was an executive director of the Bank of England and became acting chairman of JMB, senior bankers drawn from across the spectrum of UK financial institutions and backed up by on average 40 seconded executives were sent in to sort out the mess.

All the new team and those JMB staff who were not dismissed were asked to sign the Official Secrets Act. The newly appointed investigating auditors, Price Waterhouse, began an exhaustive study of each debtor.

Over the year the new management has been successful in reducing the total of loans by £100m to reach the present £400m figure. Some £310m of this is considered bad or doubtful against which £220m is being provided in case of losses. The provisions figure has fallen from the original estimated requirement of £240m.

From the start of the rescue operation the central bank has insisted that JMB's problems were restricted to its loan book which had grown tenfold in five years without an appropriate expansion of staffing and control systems.

The well known bullion dealing operation of JMB, which was of long standing and gave the bank a seat on the five-member pricing body in the London gold market, has not been an area of concern. Its executive director, Mr Patrick Smith, is the only survivor at that level at JMB.

Bullion dealing was also by far the biggest contributor to the bank's profits. Almost 90 per cent of pre-tax profits in the five years to March 1984 came from the dealing area. However, in an effort to diversify its range of activities, JMB launched in 1981 a planned expansion of its loan book. Insurance and futures trading were also earmarked for growth.

The bank's rolling five-year plan made clear that the lending policy would be to concentrate on international trade, property and smaller UK commercial and industrial loan finance. A high-risk profile was adopted (as, usually, were some what higher interest rates) and, as the word got round that JMB was in the loan business, several who had found difficulty in raising funds elsewhere made their way to the Lloyd's Avenue bank headquarters.

The result, as Price Waterhouse found out after the takeover, was a loan book heavily concentrated on certain customers or customer groups and in certain sectors. The major borrowers had also greatly exceeded the prudential guidelines on exposures - for example, the group of companies belonging to Mr Mahmoud Sipra (bulk commodity, sawy iron, shipping and film projects) alone owed \$70m against JMB's capital base of £130m.

Of the five leading borrowing groups, three were found to have problems - in addition to Mr Sipra, the Iranian brothers with loans totalling \$37m and Mr Abdul Shamji's Korean project that now appears uncertain.

On the property side the position seems better. The uncertainties include Mr Shamji (who this summer failed to meet repayments under a rescheduling agreement) and Mr Michael Hepler (who through Ravensbury Investments borrowed £2.25m from JMB for various developments - £1.5m of which is still owed on a failed South Wales super-

market development scheme).

Much of the "good" £30m in the outstanding loan book is in this area of lending.

The management and computer systems at JMB appear to have been outgrown by the mushrooming loans. The credit committee (which consisted of all four executive directors plus up to three department heads, met each Tuesday and sent minutes to both the board of the bank and of the parent) did not co-ordinate with the assistant manager who sent off the returns to the Bank of England.

These quarterly returns should have detailed all exposures by customer and sector. But JMB's accounting system was not specific enough on the connections between various borrowings. The credit committee may not have reported the full extent of exposures to the boards.

Certainly the senior staff in the pre-rescue JMB banking department was overworked. Account officers handled up to 100 customers while the norm in most banks would probably be around 40. The department's total staff was 63 before the takeover of whom 50 remain and to which on average 40 secondaries have been added.

### Terry Povey looks at efforts to untangle the affairs of Johnson Matthey Bankers, and prepare the bank for sale a year after its collapse

Gomba group with a total exposure of £12m.

Then there were the many trade finance deals with Nigeria. On October 1 last year the total exposure in this area was over £120m - which has now been reduced to some £90m and has been two thirds (that is £90m) provided for in the £220 total. Most of this business was conducted by entrepreneurs originating from the Sind - province of Pakistan. Many of these did their trading with relatives or members of the same community.

While some of this debt might be recovered following a general rescheduling agreement for Nigeria and more again from the Export Credits Guarantee Department, JMB is taking a very cautious view of these prospects given the poor documentation and suspected breaches in terms and conditions of insurance policies or contracts.

Another debtor is Mr Rajendra Sethia whose Esal commodity trading house collapsed in February 1984. He is now detained in India on fraud charges involving a total of \$300m of which JMB is owed some \$20m. Mr U. C. Golecha of Berg & Sons (no relation to V. Berg & Sons) owes some £11m and an American citizen obtained £15m for a South

Heading the banking side of JMB was Mr Ian Robert Fraser who had worked in the same department since joining the bank in 1971. Some blame for the problem loans has clearly to be directed towards him. However, the "outbreak of systematic incompetence" which



Mr Rodney Galpin

the new management argues occurred at JMB must involve others.

In addition, but not uncommonly for smaller banks, JMB had no finance director. Internal auditing appears to have been lax. A sum of £3.8m has been found to have been credited to the bank as interest income over a two-year period but not debited to customer accounts. The contribution to JMB's pre-tax profits from the banking side in the five years to March 1984 totalled £3.5m.

Before JMB can be sold there are still many obstacles to be cleared, and two strategic decisions will be required. Will JMB be sold intact or broken up and, if so, how will it be priced? The Bank of England must also consider what kind of licence will be held by any buyer. At the

very least the central bank has to recover its £100m deposit plus any additional net assets on the books at the time of the sale.

The attraction of JMB has to be the sound bullion business and the seat in the important gold "ring" (that meets twice daily to "fix" the price of gold) that goes with it. If there is a break-up, then one option would be to sell the loan book as a speculative investment at a discounted price.

Among the pressures for a speedy resolution - other than the understandable desire of many banks to get back 40 or so officers on secondment to JMB - are the political ones. Not only the opposition in parliament but also the Treasury will be making noises if progress appears slow.

Important also before any sale will be some moves to resolve outstanding litigation (especially that between JMB and its former auditors Arthur Young) and a clean bill of health from the City of London Fraud Squad which is assisting the Bank of England in an investigation into whether there was any fraud by JMB employees.

So far, there is nothing very firm as far as a target sale date although Baring Brothers, the merchant bankers, have been retained to advise on this. Five parties, among 40 who came forward just after the rescue operation was mounted, have expressed continued interest.

Looking ahead the most likely sale period would appear to be during the first three months of 1986. No sale will be possible before Price Waterhouse completes its audit of JMB for the 15 months to June - the report on which is due "late December, early January." For the moment providing an outer bound is March 31 1986 when the indemnity agreement with the banking community runs out. This could be extended but it might be politic not to ask to do so.

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## UK NEWS

## English vineyards facing a bitter harvest

Harsh weather has dealt a heavy blow to wine prospects. Andrew Taylor reports

LINES OF VINES stand on the slopes above the Kent village of Lamberhurst. Harvest will not take place for several weeks but the plants are in poor shape. It has not been a good year for English vineyards.

Lamberhurst is about 45 miles south of London, and has Britain's largest commercial vineyard, covering 50 acres. It already knows that its 1985 harvest will yield less than half of what it would expect to achieve in a good year. At best it will be a quarter of the record crop of 1983.

Whether a disappointing harvest will turn into a disaster will depend upon how the weather behaves during the next six to eight weeks. A hard early frost could finish the grapes on the vines. Heavy persistent rain could cause some of the berries to rot, further reducing the yield.

It is frustrating for English wine production which, after two excellent harvests producing quality as well as quantity, had started to come of age.

A survey by Ministry of Agriculture officials last autumn showed that there were more than 1,000 acres of commercial vineyards in England, mostly in the south part of the country. These were thought to have produced more than 3m bottles of wine during the record harvest of 1983.

This may be no more than a French or German village might

produce in a good year, none the less, English wine is growing in reputation and not just on novelty or patriotic grounds.

English wine, despite criticisms that it is expensive, is stocked by several supermarket chains. It is drunk in the Houses of Parliament and is available at a number of top London hotels. It can be found increasingly in wine bars and on the shelves of wine merchants.

English vineyards took three of the top four places in an international wine tasting organised last year by the authoritative *Wine* magazine.

The vagaries of the British climate, however, do not favour the wine grower. The grape is about the last fruit to be harvested by the Kent pickers who, for generations, have trod the Kentish summer through the soft fruits like strawberries and raspberries to the cherries, hops and apples.

This year they will find the grapes smaller and the bunches of fruit less plentiful. There are gaps along the lines of vines where plants have died; a legacy of bitterly cold spells in January and February when temperatures in that part of Kent dropped to -20 degrees C.

Herr Karl Heinz Johner, the West German winemaker at Lamberhurst - its 1984 *Schönberger* was recently named English wine of the year - says: "After two very good fruit-producing years, the plants lacked the strength to with-



Herr Karl Heinz Johner: Hoping for warm weather

stand such a sustained spell of cold weather."

"It is the same on the Continent. Vineyards around Würzburg in Franconia are talking about yields down as low as 10 per cent on normal years. Around Baden yields are expected to be around 40 to 50 per cent lower."

Grapes need warmth to achieve their full potential and a poor British summer has not helped fruit development after the ravages of the winter.

"We are hoping for a period of warm weather, to raise the sugar content of the berries in the hope that we can make up in quality

1985 will show a further profit, although smaller than in the previous year. Next year the vineyard could move back into the red.

Not all English vineyards suffered as badly last year. Wootton vineyard on six acres near Shepton Mallet, Somerset, says that temperatures there did not drop as low as in parts of Kent and East Anglia.

As a result, fruit formation is good but the berries are small because of the poor summer. Yields will be down but Wootton, like Lamberhurst, is hoping that this will be made up in this quality of the grapes.

Mr Gay Hiddlecombe, owner of St George's English wines, a 20-acre vineyard at Heathfield, East Sussex, tells a similar story: "We only lost four vines as a result of the winter, but the poor summer has meant that the fruit is small. The crop will not be as heavy as the two previous years."

St George's says demand for English wines has been boosted by the scandal over the discovery that some Austrian wines contained the prohibited chemical additive, diethylene glycol.

St George's sells at the quality end of the market. Its customers include National Westminster Bank and several finance houses in the City of London. The Dutch Embassy stocks St George's wine and 400 cases were recently sold to the Mitsukoshi store group in Japan.

## Housing repair crisis 'avoided by Germany'

BY ROBIN PAULEY

INNER-CITY housing in West Germany is better built and better maintained than in Britain - but its citizens have to pay more for the privilege, according to a comparative study of housing in the two countries published today.

West Germany has the advantage of having rebuilt much of its housing stock and infrastructure after the second world war, says the report by Mr Chris Crouch, senior lecturer at Liverpool Polytechnic.

West Germany is also richer than Britain and has been able consistently to spend more on building and maintenance, says the report.

"There is little doubt that German housing has historically been built to higher physical standards. This fact, together with sustained maintenance, has avoided the housing repair crisis that so badly afflicts British housing today."

Britain was paying "too little at-

tention" to the long-term costs of cheap house-building, the report adds.

There is also a philosophical difference between the two countries. Under West German housing policy, intervention only ensures the proper working of the market. Subsidies are paid to compensate for gaps in market provision or to alleviate hardship, but no more.

By contrast, 30 per cent of British housing is built by the state and allocated on the basis of need, cutting out the market mechanism.

West German housing, whether subsidised or not, is largely built and let by private companies and individuals, "making for a variety of style, price and tenure in a particular area and avoiding the bleakness of Britain's vast council estates."

*Housing Conditions in Britain and Germany*; L8; Anglo German Foundation for the study of Industrial Society, 17, Bloomsbury Square, London WC1.

## Monetary policy 'will ease by end of year'

BY MAX WILKINSON, ECONOMICS CORRESPONDENT

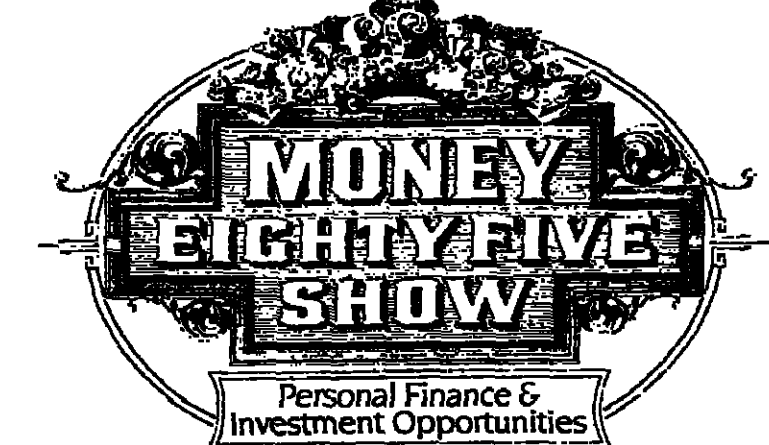
UK MONETARY policy remains tight and is expected to ease by the end of the year, says Professor Patrick Minford, head of Liverpool University's economic research group, in his quarterly bulletin out today.

He expects interest rates to fall fairly rapidly with the Treasury bill rate (the short-term rate at which the Treasury borrows from the money markets) falling to just under 9 per cent on average next year compared with 11½ per cent this year.

In spite of the high level of in-

flation, the first half of this year, the Liverpool group forecasts that the UK economy will show a strong recovery this year, with economic growth about 3½ per cent higher than in 1984.

The Liverpool group, which follows a strongly monetarist approach, expects the economy to continue to grow at a sustained rate of about 3 to 3½ per cent a year to the end of the decade, with inflation remaining at 3 per cent or less during the period and unemployment falling by 700,000 over the period to 25m.



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To match this potent driving force the MG Turbo sits firmly but smoothly on the uprated and strengthened Montego suspension system, described by those who write about cars for a living as making this one of the best balanced cars in its class.

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operate courtesy lamps and, above it all, a slide and tilt steel sunroof.

Outside are additional front and rear spoilers and colour keyed door mirrors and door handles.

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\*Car shown - MG Montego Turbo, Price £10,599, correct at time of going to press. Incurring number plates and delivery. \*Manufacturer's data. For further information see FRAT 1, page number 54104. D.O.T. figure: MG Montego Turbo simulated urban cycle 28.2 mpg/10.6 per 100 miles. Combined 26 mpg/11.0 per 100 miles. Constant 75 mph 30.0 mpg/10.2 per 100 miles. N.A.T.I. ROADWIDE CAR RENTAL RESERVATIONS THROUGH BRITISH CAR RENTAL, Tel: 0205 77223. AUSTIN ROVER TAX-FREE SALES INFORMATION - Tel: 091 475 2101 EXT 223.

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## THE MANAGEMENT PAGE

EDITED BY CHRISTOPHER LORENZ

## Product development

## New breakfast menus from Battle Creek

THEY ALL laughed at Kellogg in the late 1970s, when most of the U.S. food industry was setting off on a diversification spree into new product areas and non-foods. Competitors, pundits and analysts agreed that the world's leading breakfast cereal maker was going to end up stuck in a stagnant market—a sitting target for allegedly more vibrant brand manufacturers and for retailers' own-label lines.

Company executives now confess that their detractors had them wondering for a time. Much of what they said was true. Market growth had slowed from 7 per cent a year in the early 1970s to about 2 per cent at the end of the decade.

General Foods and General Mills were chipping away at Kellogg's market share, consumers were feeling the pinch of recession and switching to generics. The anti-sugar lobby, with support from the Federal Trade Commission, was trying to ban TV commercials for sugared cereals.

Nor was the company's confidence helped by an anti-trust case in which it stood accused by the FTC of operating a "shared monopoly" in cereals with General Foods and General Mills. Started in 1971, the case finally faded out in 1982.

Kellogg shopped around, moving in a relatively modest way into areas such as tea and frozen fruit pies, and making a few desultory offers for other food companies. But even then it was formulating its strategy for the 1980s. The first principle was that it would stick to what it knew best—grain-based products. It still earns about three quarters of its annual income from breakfast cereals, of which about 20 per cent comes from overseas markets.

As the U.S. birth rate fell, Kellogg set about tackling the older generation. Overall average consumption of cereals in the U.S. was 8.6 lb a year in 1979. Among the under-25s it was 11 lb and the 25-to-50-year-olds averaged about 5.4 lb. Setting its sights mainly on the 50m people in this section of society, it planned to boost the national average to 12 lb by this year.

It bounced straight in with five new products in 1979, when other manufacturers launched

another half dozen between them, bringing the total of new launches that year to more than double the usual number.

Neither the pundits nor Kellogg have been proved wholly right so far. The company's earnings and dividends have continued to rise, as they have each year since the mid-1980s. It is still leader in the world's major markets, and this year will take about 42 per cent of U.S. sales, after own-brand labels cut their share to 37.5 per cent in the 1983 recession.

Even so, overall average consumption of cereals in the U.S. is still only 9 lb a year.

**Chris Parkes reports on Kellogg's relentless innovation drive**

and the 25-to-50 group is still eating only about 6 lb. The upshot has been a continuing and costly cycle of new launches and counter-launches in the industry. Kellogg has doubled its annual launch rate in the past two years.

However, unlike its main competitors, it has not been diverted by mistakes in unfamiliar product areas, and its early decision to stick to cereals has given it something of a head start.

Kellogg aims to maintain and extend its lead at home and abroad through its notably aggressive marketing department and especially through the efforts of its top secret research and development building at Fort Custer, a couple of miles from its world headquarters in Battle Creek, Michigan.

That there are only about a dozen people in the main marketing office compared with some 400 labouring in Fort Custer with links to universities and biotechnology spec-

alists throughout the world, underlines the strength of the company's commitment.

Its main target remains the U.S. market, where Christopher McNaughton, head of the U.S. cereals division, still sees enormous scope for growth. He has a distinctly jaundiced view of the traditional concept of a "saturated" market. While average consumption of cereals in the U.S. is about 9 lb a head, in Pittsburgh the figure reaches 13 lb, and he sees no reason why the whole of the country should not become a nation of Pittsburghers.

Cornflakes is still Kellogg's main product in the U.S. and, despite the continuing war against sugar, Frosted Flakes (Frostitas to Europeans and Zucartitas in Mexico) is still number two in the rankings. But these and others of the company's main lines traditionally appeal to mostly younger members of the community. Faced with an ageing population, the company must find new markets and create new products to fill them.

In the U.S. in the recent past it has introduced Nutri-Grain, a whole grain product sweetened with NutraSweet (aspartame) which aims at the customer seeking more fibre and less sugar. Coming up is an old favourite with a new recipe: All Bran with extra fibre and NutraSweet.

Just Right, which includes 100 per cent of the U.S. Government's recommended daily average intake of nine vitamins plus iron and zinc, is pitched at women. TV commercials show elderly people eating Apple Raisin Crisp. On British TV Steve Cram is seen bounding around the mountains full of the glucose-laden Start cereal.

The object goes beyond the simple design of aiming a product at a specific market. Once the product is in the house, the company argues, then all members of the family will try them.

The U.S. food market offers extravagant rewards for successful innovators, and Kellogg is innovating with a will. While there is always the threat of me-too products appearing from among the competition, the costs can be phenomenal. Although seemingly short on personnel, Kellogg's marketing department packs a mighty

IF THE citizens of Pittsburgh consume an annual 13 lb of cereals each, then the British are honorary Pittsburghers. Average UK consumption last year was 12.4 lb of cereals a head—the equivalent of 11 large packets—and 6 per cent higher than in 1983.

The cornflake habit has grown steadily since the company opened its first factory in the UK in 1938. Annual growth has averaged almost 3 per cent since the mid-1960s as the traditional cooked breakfast has faded. It has been given a boost more recently by pre-fibre propaganda.

Kellogg now claims 43 per



punch. A budget which allows it to spend \$20m on each new product's U.S. marketing in the first year alone pitches the newcomer high in the public consciousness.

This may intimidate the opposition, but it also ensures that the Kellogg market and product research is kept finely tuned. It has made its share of mistakes. Raisins, Rice & Rye, despite its healthy ingredients, is looking distinctly poorly. Says McNaughton: "If the U.S. consumer decides he doesn't want rye for breakfast, then there is nothing we can do about it."

The market was certainly ready for C-3PO, a pre-sweetened line for the millions who lost their hearts to the latter-day Tin Man who stalked the sets of the Star Wars movies. "It looked like a winner. It took a big market share. It went straight in... and straight

## The growth of the cornflake habit

out," recalls McNaughton. He puts part of the blame on the failure of the film makers to keep the series going strongly as the many Star Wars character licensees had expected. But he is ready to admit that most of the responsibility lies at Kellogg's door.

For once, Kellogg was not leading in the market it claims to know best. The blunder still rankles. "We fell in with the general flurry and clutter of licensed character products," says Joe Stewart, head of public affairs. "It is not healthy for the industry to bring out products which have no consumer rationale. It was the antithesis of our whole approach."

The company is clearly hoping—probably against the odds—that it can avoid becoming enmeshed in any more of the short-term marketing battles which ensue when show-biz

Scandinavia has been particularly rewarding, with the Danes and the Swedes now eating well over 4 lb a head. But, Britain apart, progress has been sticky in the more populous parts of Western Europe, which offer the prospect of the bulky turnover rates the company seeks. The West Germans eat twice as much breakfast cereal as the French, but this is small comfort considering that the average Frenchman's annual intake is still measured in ounces.

McNaughton is undeterred. "Almost all the governments

in the world are endorsing increased consumption of cereals and stressing the fibre aspect," he says triumphantly.

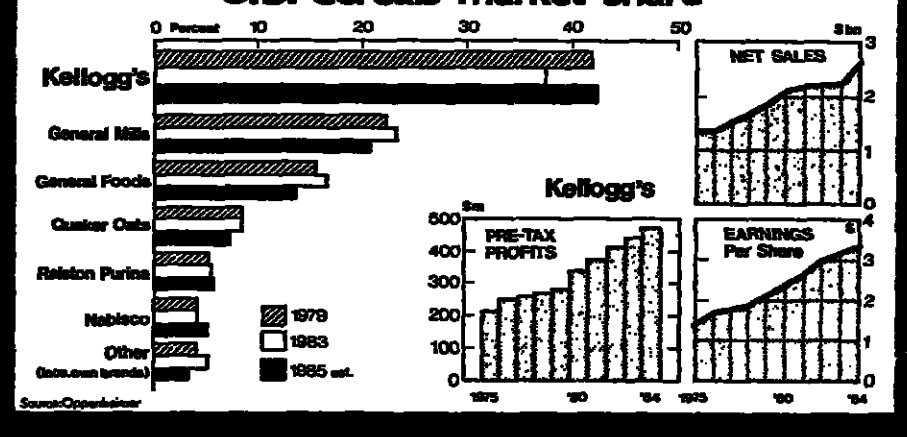
"This focus on nutrition and health has given our business a big third party boost." Kellogg's confidence is reflected in heavy investment in factories in Denmark, West Germany and Spain, all of which McNaughton classifies as good or potentially good markets. The people have relatively high incomes to afford the product and milk supplies are plentiful and cheap. Detecting that health propaganda is effecting a

shift from the traditional German breakfast of cheese and processed meat, he views the Federal Republic as "an outstanding opportunity."

The company also has high ambitions elsewhere. It has factories in six Central and Latin American countries, South Korea, and even a brown rice processing plant in Japan turning out Gennat Flakes. In Africa, Kellogg has long term plans to spread its operations from South Africa to the whole continent.

Wherever it goes, however, the ground rules remain the same. "We create products to a desired consumption profile to fit age, social and health needs," McNaughton says.

## U.S. Cereals market share



as C-3PO and his pal R-2D2, the animated dustbin.

It considers the money better spent in the R&D building, where, according to McNaughton, expenditure has increased four-to-five fold over the past few years. The insatiable demand for new products for the U.S. market is easily matched by management demands for cereals to tempt the masses in the world outside.

Rye did not work in the U.S., but it might appeal elsewhere. There are many other grains which might suit the Kellogg treatment and a thousand other markets as yet untapped. The company stoutly defends its efforts in the third world. To the unkind jibe that its packaging is as nutritious as the cornflakes inside, it replies that grain represents one of the few opportunities the developing world has for feeding itself.

"Other protein sources are not going to keep pace with population increases," says Stewart. Processing costs for meat and other conventional sources are too high for these markets and unlikely to come down.

Kellogg, in co-operation with other specialist companies, is already working on biotechnological methods for increasing the protein content of grain. For areas where milk is not available it is working on substitutes.

McNaughton is convinced that this single-minded approach to corn grits and its cereal cousins is correct. Pressure to diversify did bring about some changes—the company also makes fruit pies, yoghurt, tea and waffles and more recently it has joined the fringes of the granola bar business. In general, however, it has kept its head down because of the difficulty of finding acquisitions at

the right price to match or even approach its own average return on equity of 28 per cent.

Kellogg's main competitor, General Mills, is in turmoil at present as it retreats from the corpse-strewn toy market. Monopoly, children's records, Neat balls and Boggle blended in with Wheaties and Betty Crocker foods. In the meantime, it has lost market share in cereals. General Foods has also seen its market share slide.

Once the diversions are behind them these companies are certain to start fighting back. But Kellogg has the advantage of several years in which to pinpoint its objectives and develop the infrastructure which will help it attain them. It also has the advantage of a remarkably stable management. Most of the senior executives have been with the company for 35 to 40 years.



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## TECHNOLOGY

# Harnessing the potential of wave power

VAST amounts of energy have long been known to exist in the waves of the sea. But though projects to exploit it for generating electricity have become common, the waves' potential as a source of propulsion power for ships has only been explored more recently.

A British patent using the techniques was filed in 1983, and now researchers, particularly in Norway and Japan, believe they have developed hydrofoils which can not only extract power from the waves but reduce pitching and rolling in rough weather. The foils could also be powered, and the claim is that they are more efficient than conventional screw propellers.

Sea trials last year on a 180 gross ton fishing vessel demonstrated that the Norwegian system could cut engine power requirements by about 20 per cent in head waves, representing 32kW at 6 knots. Mr Einar Jakobsen, senior engineer of Oslo's Wave Control, the company behind the scheme, believes that even this result could be improved. The trials showed that the hydrofoil's support struts offered considerable drag and he has since considered using those, too, for providing power.

Japan's Hitachi Zosen Corporation is meanwhile seeking backing from the Japan Foundation for Shipbuilding Advancement—financed from betting levies on powerboat racing—to extend its work for two more years. Sea trials are planned with a 600 deadweight tonne ship and US\$ 250,000 is

needed to pay for this and the supporting theoretical work.

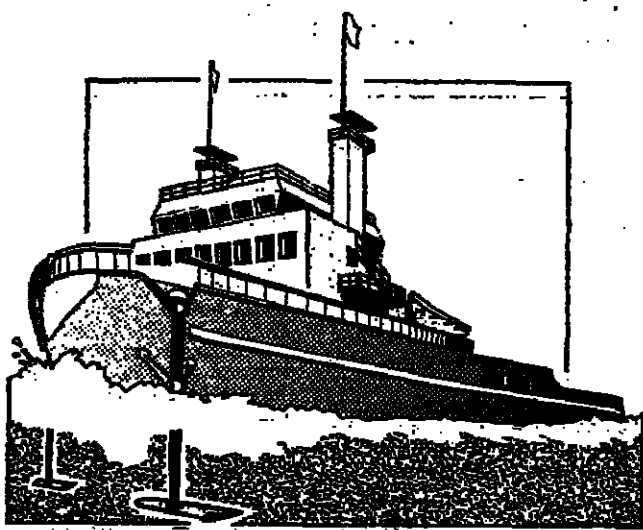
Dr Hiroshi Ishihara of Hitachi's Technical Research Institute has studied the effect of a ship's length on converting wave energy into propulsion. Tests with a two metre model showed that head waves with a 2.2m wavelength gave the highest speeds. Full-scale wave powered ships would therefore need to be designed to suit their particular routes.

Dr Ishihara analysed wave data

**Researchers are developing ways of using hydrofoils to propel ships by extracting wave power, reports Paul Gunton**

for the Japan-U.S. route and found that the commonest waves were ones at six second intervals, closely followed by waves of eight seconds. Their respective energies represented 11.7 kW and 20.6 kW for each metre of wave, so he proposed to concentrate on the eight second waves, which have a wavelength of 100m. His proposed ship would have a length of 80m and a displacement of about 2,700 tonnes.

Main engine power for such a ship would normally be about 515 kW (700 bhp). Dr Ishihara estimated, giving a speed in



Artist's impression of a foil system on a supply vessel.

calm water of 11.4 knots. Head seas would normally reduce speed to 7.1 knots, but the waves' power could actually increase it to more than 12 knots. "This suggests that the effect of the foil is very big," he said.

An analysis Mr Jakobsen commissioned from Veritec, a Norwegian marine consultant, also predicted fuel savings from wave propulsion. Veritec found that at nine knots, fuel consumption of a 70m ship could fall by 42 per cent. The higher the speed, the smaller the effect, so while there are 21 per cent savings at 12 knots, 15 knots yields only 9 per cent. Larger ships would also see savings, Veritec concluded. A 180m vessel operating in the North Atlantic would use 35 per cent less fuel at 17 knots and 9 per cent less at 21 knots.

Dr Ishihara and Mr Jakobsen were the main speakers when engineers studying wave propulsion gathered recently at University College, London.

Those keen on exploring the possibilities include a Strathclyde University team studying the stabilising effect of foils on offshore structures. Using their power for dynamic positioning is also part of the project.

Reading University is another centre where wave power research is under way. Reading's Professor Francis Farley, who arranged the London meeting, has a different approach from other teams. He argued that, since ship motions are so important to a foil's effectiveness, it would be best to establish the optimum conditions for the foil, and then design a hull to provide them.

Wave tank experiments are being conducted to measure thrust forces from a foil using computerised servo mechanisms to control speed, heave and foil angle. In practical use, sensors would be needed to monitor conditions at the foil itself, continuously adjusting it for optimum output.

Paul Gunton is deputy editor of The Motor Ship.

## HOW WAVE PROPULSION DEVICES WORK

ALL the wave propulsion devices developed so far operate on the same principle. A hydrofoil, usually horizontal, is mounted below the water surface and attached to the ship. It is pivoted at the leading edge but restrained by a force which tends to return it to its neutral position.

Power is extracted by using the relative motion between the foil and the water, which is a combination of the wave motion itself and the pitch,

roll and heave of the ship. As the foil moves downwards, its trailing edge deflects upwards. The restoring force keeps it at an angle of attack to the water flow, so lift is generated. The forward component is useful thrust; the vertical part acts against the ship's motion and tends to steady the vessel. On the upward movement, the foil deflects down, but thrust is still generated. The effect is similar to that of a gliding aerofoil; the aim is to obtain

maximum forward motion from minimum vertical travel. Restraining forces can be produced either by simple spring systems, or from pneumatic and hydraulic arrangements capable of adjustment to suit vessel speed. In a proposal by Reading University, foil position would be determined from local conditions and fixed using servo systems to give a more precise arrangement. Constant trimming would get the best from foils.

Asymmetric sections which can change shape to suit upward or downward motion would further improve efficiency, as would carefully designed foil shapes to minimise tip vortex losses. Work at Sweden's Chalmers University in 1982 established that the best plan shapes would have curved leading and trailing edges. The similarity between these ideal shapes and the tails of fast swimming fish and mammals has not been lost on supporters of wave propulsion.

# Mark Meredith on remote control undersea vehicles Deep sea oil exploration spawns a sophisticated breed of robot

FAR BELOW the waves in offshore waters, an advanced type of underwater monster, the remote-operated vehicle (ROV), is multiplying fast. Although used for many years, the vehicles have now reached such a level of sophistication and development that they can take over much of the work traditionally carried out by divers.

Oilmen in Aberdeen swear that "technology can never replace the dexterity and experience of divers," but the conditions and costs of developments offshore in Britain as well as other countries have concentrated efforts to improve underwater technology.

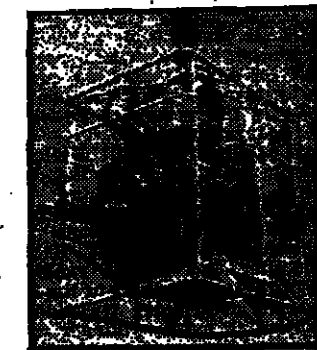
Exploration for oil is now moving from the North Sea into the North Atlantic, where drilling ships and semi-submersible drilling rigs will operate in horrendous weather conditions, and at depths of 2,000 feet or more. Divers usually operate at depths of less than 1,000 feet, which means that work on the seabed such as installing the guidelines for drilling equipment, changing seals and clearing debris can really only be done with underwater robots.

Another key factor in the next wave of offshore exploration will be the expense. Oil companies will be working to much tighter budgets as they develop newer oil fields. Technology with running costs about one quarter of that of divers has grown up in the last two years to meet this demand.

A diver plus a special support ship equipped with decompression chambers and backup oxygen something between £5,000 and £5,000 an hour to operate. Added to that possibly 70 per cent of his work rates as time consuming rather than demanding—cleaning of marine growth from the giant steel legs of oil production platforms, for example.

Companies like Comex Roulier Diving or Wharton Williams, which both employ divers and run remote-operated vehicles, argue that the technology, while taking on a good many divers' chores, will leave them free to handle more challenging underwater work. Divers in the UK are nonetheless worried and a recent slump in demand for their services has not helped matters.

The requirements of the North Sea in particular have helped British-based companies



Undersea template worker.

taxi—the central vehicle with its hydraulic thruster propellers for manoeuvrability and power—as well as established and reliable.

Attention today is on what is plugged on to that vehicle. Below Ose's Dragonfly Vehicle, for example, a whole variety of equipment can be fitted, including television and stereo cameras for observation and manipulators for turning bolts and valves, devices for cleaning platforms, ultrasonic fault detection equipment or non-destructive test equipment.

Ose, with advice from its client Comex Roulier, produced the Dragonfly, a smaller version of the Dragonfly to work within the template of Comex's Ruyton platform. The template works like a vast steel frame pulled into the seabed guiding drilling and other operations.

This co-operation led to further refinements including a type of garage or cage to protect the ROV as it is lowered from powerful waves in the so-called splash zone. The vehicle swims out of its cage on its own umbilical cord. It can be dragged back into the cage if there is a failure during the operation.

To date U.S. underwater technology has dominated the market, but it is being superseded by equipment such as Ose's film Dragonfly, which can operate at depths of 6,000 feet, its smaller UFO camera-equipped vehicle and the Duplus, a system which will allow filming of unmanned use at depths of 8,000 feet.

The Dragonfly was developed jointly with GEC Avionics with support from the Department of Energy's Offshore Supplies Office which monitors and encourages British participation.

This year Betanico, an Aberdeen-based company, introduced its Triton remote-operated vehicle developed to British specifications by the company's Florida-based affiliate, Perry Offshore. It is developing a range of equipment on skids to be attached below the taxi vehicle, which has 50 horsepower strength and can sit 2 tonnes underwater.

The controls and supply lines for the vehicles are attracting almost as much attention as their attachments. The development of fibre-optics has enabled a large number of control and information signals to be sent down one line. Multiplexing equipment at either end sorts out the signals passing at on the vehicle operations. Computer developments in controls and instrumentation have radically altered the communications and operation of the ROVs.

Fibre optics lines from the ship to the vehicle below have led to problems of flexibility in the ship ring, a swivel attachment which allows the vehicle to turn without twisting its umbilical line to the surface. These are now being overcome. The ROVs have also had to cope with problems of torque. As automatic winches tighten or loosen a bolt, the vehicle must steady itself on the surrounding structure using magnetic feet.

Mr Tom Elbert, managing director of Comex Roulier Diving, foresees the use of ROVs for the new generation of seabed wellheads which will require machinery able to help investigate faults. Special needs will breed dedicated equipment for the ROVs—for instance, tools which can both override sensors monitoring the performance of a valve and operate the valve.

EDITED BY ALAN CANE

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## Fighting corrosion with alloy

NKK is supplying commercially a newly developed corrosion-resistant steel sheet electroplated with zinc-nickel alloy.

The new sheet, EZN-UC, was developed for the motor car industry to replace conventional zinc-plated sheet with a zinc-nickel alloy. The new sheet was designed to overcome the problem of peeling or flaking of zinc powder during forming and at the same time improving weldability and workability.

NKK's own tests show that EZN-UC allows the formation of red rust only slightly after exposure to 300 cycles of corrosion testing over 70 days.

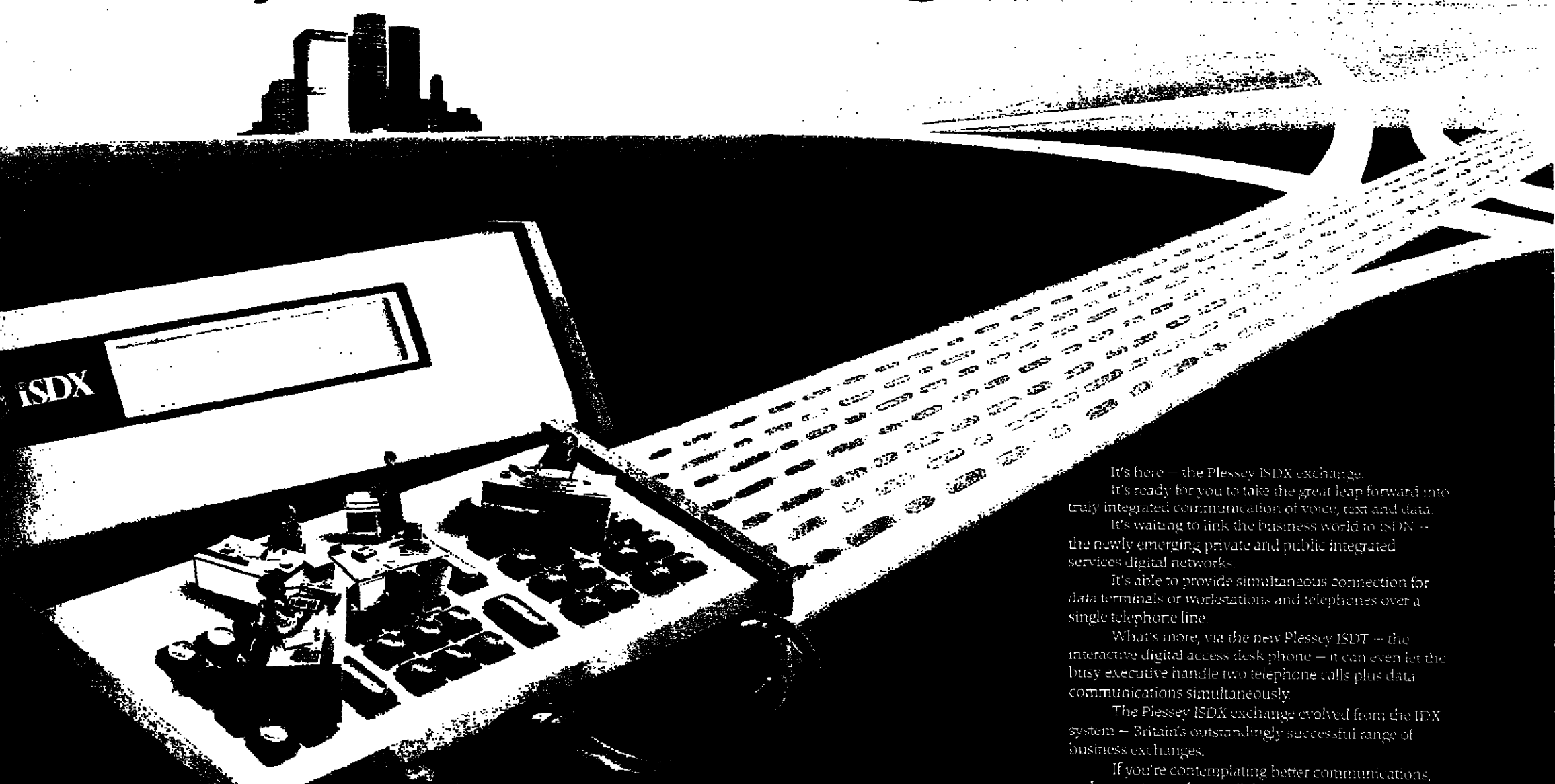
To meet demand, NKK has commissioned a new coil coating line at Fukuyama Works with a monthly capacity of 3,000 tonnes.

## Philips heralds TV adapter for MAC reception

A SPECIAL adapter making it possible for conventional television sets to receive programmes from broadcast satellites transmitting in the new MAC standard will be ready by a late beginning of 1987, Philips Electronics claims. The adapter connects to the television set and to a parabolic (dish) aerial outside the house.

MAC transmission prevents interference effects in picture reproduction and improves sound quality. Philips is contemplating a gradual conversion to high definition television where the picture quality will be equivalent to that of 35mm film. The MAC standard adapter is a step in that direction.

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## RESOURCES REVIEW: CHINA

## The long haul to self-sufficiency

By Colina MacDougall

A COUPLE of weeks ago, a plaintive letter in Peking's English-language paper China Daily grumbled that rocketing numbers of university students were consuming the nation's precious electricity by holding fry-ups in their dormitories. This is just one symptom of the alarming shortage of power and other fuels which is hampering China's growth. This year it is worse, thanks to a top-sided burst of development in industry in the first half of the year.

Power generation was 50bn kWh short of demand this year, Qian Zhengying, Minister of Water Resources and Electric Power, declared in August. The power shortage was "very serious" everywhere in China except the far west. With total output expected to run at about 400bn kWh this year, the gravity of the situation is clear: there is no way in which China can make up so large a power deficit with present facilities.

Peking has far to go in expanding energy resources so that even students can stir their works over a modern fuel. Production of coal, power and oil is steadily rising but is hampered by old technology, inadequate transport, lack of investment and bureaucratic wrangling.

The power shortage is the single biggest handicap for Chinese industry. It is not just that there are not enough power stations. When 80 per cent of power is coal-generated, the knock-on effect of groaning rail transport from the coal-rich north-west is considerable. Absurdly, last year China had to ship coal into Shanghai from Australia to help make up the shortfall.

Peking has ambitious plans to fill these gaps. A programme to develop resources to produce at least 1.2bn tons of standard coal equivalent by the year 2000 is on the stocks. This will require output of at least 1.4bn tons of raw coal, 200bn tons of oil and 1.2bn kWh of power, the World Bank stated in its 1985 report on China. On these levels of growth depends China's plan to quadruple industrial and agricultural output by the end of the century.

In 1984, production was 779m tons of coal, 114m tons of oil and 375bn kWh of electricity. The World Bank's report did not disagree that China's targets for the year 2000 were attainable, though it suggested that emphasising the service sector instead of production would

lighten the burden. Nevertheless, China obviously has a very long way to go in the next 15 years.

China's development policy since the 1970s has been to focus on coal and oil as both are exportable commodities. This has required new railway lines, one of which (Datong-Qinhuangdao) is on the way to completion. Next has come nuclear and to some extent hydro power, since both would solve shortages in the handicapped non-coal areas of China. But as thermal plants have been soft-pedalled, there has been a marked slackening in the rates of growth of power generation.

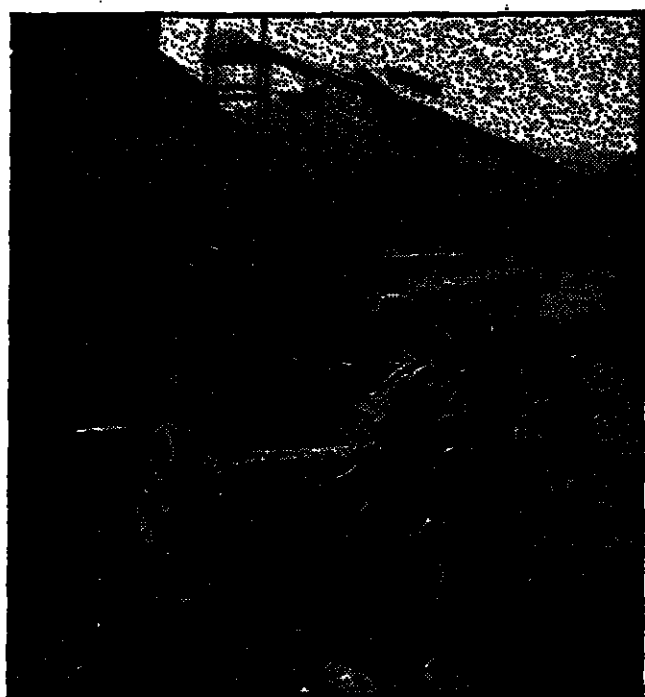
China has no shortage of coal. Reserves are put at around 780bn tons. Production has already risen by over 25 per cent since 1981. The newly appointed Coal Minister Yu Hongen, said recently that the target for 1990, the last year of the seventh five-year plan, would be 1bn tons.

The Chinese are investing heavily in large, modern mines. This year 130 mines with a total annual capacity of 131m tons are under construction. Many of these are Chinese-built (China has 34 factories churning out mining equipment) but some of the largest projects will have a sizable foreign input.

The first Japanese Exim-bank-financed mine, with a 3m tonne designed capacity, at Xiqu in Shanxi province's Gujiao field, started production earlier this year. Work has begun on the Luan mine in Shanxi with loans of \$657m, \$128m from the World Bank and the rest from West Germany and the UN Development Programme.

Industry reports say the Shell Coal International feasibility study on the Jining No. 2 mine in Shandong is completed and negotiations on a joint venture will begin shortly, but the company will not confirm this. National Coal Board proposals for extending the Tangshan mine in Hebei were presented earlier this year, but long delays are likely because of site problems.

However, Romanian technology has gone to the Baolong mine, which will be paid for in coal from its 1.2m-ton planned output. The Italian company Technotrade has sold \$180m worth of coalfield equipment to the China Southwest Energy Resources Corporation, probably for mines in Guizhou



Women workers at a coal mine in Shanxi province.

province. Potentially the biggest projects are the proposed open-cast mines in Liaoning and Shanxi provinces and Inner Mongolia.

Fushun in Liaoning is being upgraded, with Fluor of the U.S., to produce 5m tons of coal and 10m tons of oil shale annually by 1988. The \$650m joint venture between the U.S. company Occidental's subsidiary, Island Creek Coal, was finalised in June after years of haggling over prices and work at the Pinghuo site has begun.

Sites at Huotshue, Yimshue, Jungaar and Yuenbushan, all in Inner Mongolia, have been surveyed by foreign companies and at least one — the U.S. Bechtel — has a contract for a mine and coal dressing plant.

But the transport of coal remains a problem. The Chinese need to move it from the north-west to the coast, to supply industry and the export trade.

The new heavy-duty rail line from Datong in Shanxi to the port of Qinhuangdao, and a further planned west-east line, are not yet finished. In contrast to China's abundant supplies of coal, oil reserves are problematic. Modern technology imported

into major fields like Daqing in Heilongjiang province has stepped up output from an early-1980s plateau of around 100m tons annually to an expected 120m tons or so this year. But these fields — especially Daqing, which produces around half China's output and has done so for the past 20 years — will run out in the foreseeable future.

These Chinese have made no major discoveries to replace them. Foreign teams have been surveying under contract in China's far west but no finds have been reported. Several years ago China's planners blithely assumed a major bonanza offshore, and this has failed to materialise.

After two years of drilling offshore, foreign companies are depressed. "There are no big fields out there," says Mr David Harding, formerly in charge of BP's South China Sea operation. Apart from Arco's strike of gas off Hainan Island there have been no significant finds.

For mainly political reasons, the French company Total is developing a small find in the Beibu Gulf off southern Guangdong, along with the Chinese. Three others by Esso, ACT and Phillips, are mar-

ginally commercial. BP and Chevron-Texaco's wells in the South Yellow Sea have come up with little.

In the Bohai Gulf to the north, the French company Elf has pulled out. While the Japanese are developing small finds with the Chinese side, this is probably just to maintain good relations.

"The best area may be the East China Sea, where the Chinese are drilling on their own," Mr Harding added. "They've made two or three discoveries, but of course we don't know if they're commercial by Western standards."

Through the full implications of this disappointment still has to sink in among Canton officials who continue to build an enormous new oil centre, it is registering in Peking. A smaller number of foreign companies put in bids for the second round of drilling block allocations earlier this year, and they've made the terms tougher.

In a first response to the changed conditions, Peking has opened ten provinces south of the Yangtze to foreign offshore exploration. However, this is not an inviting prospect. Sichuan, where gas and oil are known to exist, is excluded. Other Chinese oilfields are in the north. The probable negotiating tussles with local bureaucracies over traffic rights and the like are very of putting.

So far only one foreign group has nibbled at the bait. An Australian consortium led by CSR Orient Oil Pte. Ltd. and including BHP agreed last June to explore a small area on Hainan Island off Guangdong.

China's development of nuclear power, planned for regions far from coal resources, is way behind schedule. The first plant, essentially a joint venture between the Chinese and Hongkong's China Light and Power Company, at Daya Bay in Guangdong, will not be on stream till at least the mid-1990s. Though site work has begun, contracts with the proposed equipment suppliers, Framatome and GEC, are not yet signed.

"The Chinese are still mulling about the price," said one observer.

The Chinese are building a small 300 MW plant on their own (but with some imported equipment) at Qinshan near Shanghai. They plan another (900 MW) at Jinsan, broadly

in the same area. Two 1,800 MW plants with considerable foreign input are on the stocks for Jiangsu province (at Suzhou) and Liaoning, which KWU and Westinghouse are reportedly chasing, but these now seem likely to be deferred because of foreign exchange costs.

Delays on the nuclear sector might speed the development of China's hydro-power resources which currently contribute only about 20 per cent of electricity generation. Three rivers could support massive exploitation, the upper Yellow River, the middle Yangtze, and the Hongshui in south-western China. So far, however, the environmental problems and costs have postponed final decisions on the overall plans.

However, work has begun on some areas. The Gezhouba dam on the Yangtze is under construction. So are two of the ten planned for the full Hongshui development, the 1,320 MW Tianshengqiao phase I and the 1,875 MW Yantan. Two more in Yunnan are also under way, the 1,500 MW Mawan scheme and the 600 MW plant at Lubuge (the latter with World Bank finance).

With the growing availability of coal, thermal power generation will get a new boost. According to the latest issue of the semi-official U.S. magazine China Business Review, more than two-thirds of the 30,000-40,000 MW of new capacity the Chinese plan to add in the next five years will be coal-fired. Equipment for some 10,000 MW of this will be imported for power stations in the east coast cities.

Japanese and West German companies are pursuing contracts for this equipment with vigour. "We may see deals made before the end of 1986," said one industry executive.

At least one foreign company, Kanematsu Goshu (which has reportedly invested in two power stations in Shenzhen, adjoining Hong Kong) has formed a joint venture with a Chinese locality.

The swing to thermal power is probably a wise move by Peking. Conventional power stations need a far shorter lead time than nuclear or hydro, and more coal and better transport seem likely to be available in the foreseeable future to make them a practical proposition. If the plan succeeds, in a few years China's power may begin to catch up with spiralling industrial demand.

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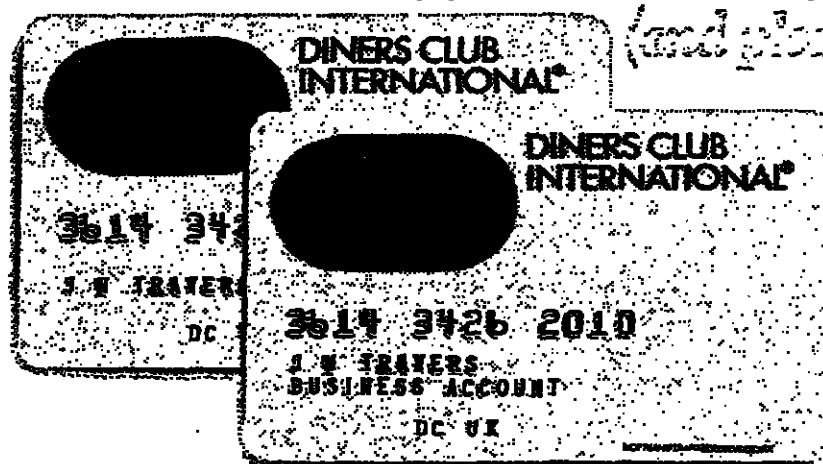
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Monday September 30 1985

# London's role in commodities

A NEW chairman—tomorrow joins the London Commodity Exchange, Britain's once proud marketplace for sugar, cocoa, coffee and—more recently—gas oil futures, at a crucial moment in its history.

As he takes up his appointment, Mr Saxon Tate, former chief executive of the Northern Ireland Industrial Development Board, faces a twin challenge: how to arrest the decline in trading volumes on the traditional soft commodity markets, and how to steer them safely into the new era of City regulation.

Trading in the four LCE commodities is down by about 30 per cent this year. True, this partly reflects the depressed state of commodity markets in general and of agricultural ones in particular. Large and increasing surpluses of supply in just about every product have driven prices down, and smothered trading interest; the inflationary environment of the 1970s, of which commodities were the main beneficiaries, has made way for one dominated by currency and financial market volatility.

But there is no disguising the fact that even in today's stagnant conditions, other commodity trading centres have been gaining market share. The powerful Chicago futures market has been changing its focus from a traditional range of commodity price risks, more than ten years ago, but it was only last year that the London International Financial Futures Exchange (LIFFE).

Efforts to set up crude oil futures trading in London to match the success of the New York Mercantile Exchange have also stumbled once and the International Petroleum Exchange is only slowly coming round to trying again.

Mr Tate needs to act quickly to stamp his authority on the LCE if it is to have any chance of reversing the decline. There

are two immediate issues: one concerning the structure of the exchange; the other regarding the overall regulatory framework.

At present, the LCE is divided into four separate markets, each master in its own house, dominated by traditional trade houses, and extremely jealous of all the others. This reflects the generally fragmented nature of London's commodity markets.

If London wants to compete with the more centralised and much wealthier U.S. exchanges, these individual markets are going to have to sacrifice some of their power. The LCE's planned move to an expensive new building in two years' time would provide an ideal opportunity for restructuring the markets—perhaps by bringing some of them together on the same trading floor as in Chicago or New York, to cut costs.

Regulation is an even thornier question. Many of the younger people on the markets accept that the only way they can achieve a much-needed boost in trading volume is to attract more interest from ordinary investors.

**Short-sighted**  
 Speculators are necessary, to carry the risks brought to the market by institutional buyers. Volume is also necessary, because the LCE's finances are heavily geared to turnover. This year, the markets have an obvious opportunity to act, following the Chancellor's decision to give futures dealers more favourable tax treatment in this year's Budget.

Nonetheless, the fact remains that the public image of commodity trading in Britain is poor and under the current system investor protection is minimal. Efforts to promote a self-regulatory organisation for the futures markets, the Association of Futures Brokers and Dealers, are proceeding very slowly.

Admittedly, it is the worst possible time to try to graft regulation on to an industry which is already suffering from depressed turnover and increasing costs. The traders who use the LCE simply to hedge physical cargoes of cocoa or sugar do not see why they should have to pay for an organisation without perceptible direct benefits for them. Mr Tate's message should be that this is a short-sighted approach. It may in any case be overtaken by events, when the Government spells out what the new City regulatory bodies should be doing in its Financial Services Bill—later this year.

# Punjab votes for moderation

MR RAJIV GANDHI appears to have the politician's essential, if intangible, gift of being lucky, which really means an ability to do the right thing at the right moment, and a measured degree of boldness. His luck, thus defined, held in the Punjab state election which ended in a sweeping victory for the Akali Dal, the party of moderate Sikhs.

Whether the Indian Prime Minister, as has been suggested, actually wanted the Akali Dal to defeat his own party, the Congress (I), is really secondary. What does matter is that the election created a basis for a lasting accommodation between the Punjab and the central government, and for ending two years of direct rule of the state from Delhi.

## Grievances

The Akali Dal demonstrated its readiness for an accommodation with Delhi in July when it reached an agreement with Gandhi intended to remedy Sikh grievances. The agreement was also an earnest of Mr Gandhi's readiness to seek compromises.

That is of the greatest importance. A country as big and as diverse as India cannot be held together by democratic means without a measure of devolution. Mr Gandhi has shown that he knows this, not only in his dealings with the Punjab, but also with other troubled regions. It sets him well apart from his mother who had little patience with dissenting regions. Her fear that an ineffectual central power might eventually have the country break up into its constituent parts, was not baseless. It will be up to her son to find the correct balance between pliability and firmness which alone can solve the many regional problems of India.

So much for the positive side of events in the Punjab. Several grave questions, however, remain. Only statesmanship of a high order on Mr Gandhi's part and on that of the Akali Dal leadership can solve them. The power of the terrorists to create mischief persists, even

though the popular mood among the Sikh population, especially in the villages, appears to have turned against them. A good turn-out at the elections demonstrated the weakness of the extremists whose leaders had called for a boycott of the polls.

Akali Dal, the winner, has yet to demonstrate its cohesion. In the past it has often been rent by divisions and factionalism. It is to be hoped that the chance to exercise power in the Punjab will help to cure that propensity.

The party also has a record of ineffectuality which it must overcome if it is to give the necessary leadership in the state. The problem is that the murderous record of the Sikh extremists a great deal of personal courage will have to be summoned.

Even the pact reached in July between Mr Gandhi and the Akali Dal requires much fleshing out if it is to serve as the basis for a stable relationship with Delhi. Disputes with neighbouring Indian states about the use of river waters—a matter of crucial importance in India—and about borders were left open. So was the dire question of greater measures of political devolution.

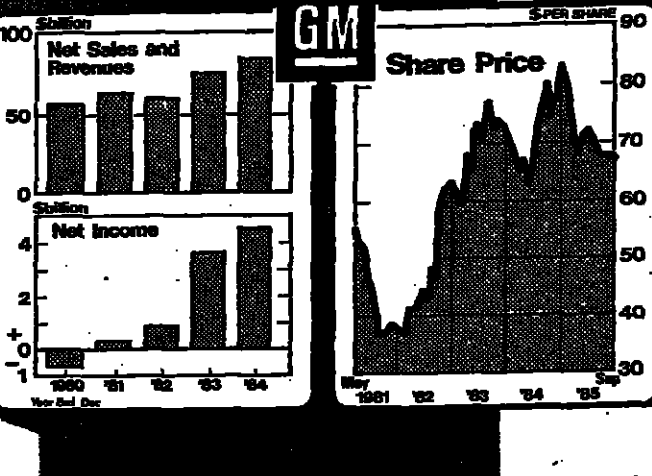
Extremists have plenty of opportunity, therefore, to fish in troubled waters if things go badly. Without firm political leadership in the Sikh community, the minority problem will fester on with occasional outbreaks of sickening terrorism. The consequences would be dire not only for the Punjab but also for India's Federal cohesion.

But if the Akali Dal lives up to the hopes reposed in it and a constructive dialogue takes place with Mr Gandhi, India will have taken a great stride forward. It would enable Mr Gandhi to take the wind out of the sails of the extremists unwilling to yield any of Delhi's central power or the power of the Congress (I). A precedent would have been set for redrawing, and eventually eliminating, the communal strife that has cost India dear.

## GENERAL MOTORS RE-ORGANISATION

# Mr Smith answers his critics

By Kenneth Gooding, Motor Industry Correspondent



ROGER SMITH, the man responsible for the biggest upheaval at General Motors in its 75-year history, is a short, rather rotund individual. When he speaks it is with a thin, slightly wheezy voice. Like many other executives within GM he exudes a folksy charm rather than dynamism.

In his suite of offices on the 14th floor of GM's headquarters building in Detroit—relatively modest for a \$1.5m-a-year executive—he is relaxed and affable and can still show intense pleasure at the sight of a plate-full of Pecan nut cakes supplied by the company canteen.

Before Mr Smith took over as chairman of GM in 1981 it had not made a substantial acquisition for 30 years. Neither had it made any major changes to its management structure, put together in the 1920s by Sloan. Sloan presided over the group for 36 years.

All that has changed in the past 24 months. GM, already the world's largest automotive group, has made two massive acquisitions: \$2.5bn for Electronic Data Systems, the Dallas-based computer systems group, and \$5bn for Hughes Aircraft, one of the major U.S. defence contractors.

Like an old-style wheeler-dealer he explains: "How much did I pay for EDS? I'm holding in the treasury right now close to 30m shares of EDS. I paid

simply pouring money into new plants and start-ups and what we call front loading—in other words, doing our engineering work earlier than we would normally in the model development cycle because it pays big dividends.

"We are carefully watching the balance of current income against what we can afford to invest for the future but we are taking on an awful lot at this time: the reorganisation, the tremendous plant investments and start-up for those plants, the front loading. But once we are through that we will have something behind us that we will have forever."

Mr Smith admits that the time has probably come for a pause in the acquisition programme. "I think we've reached what you might call the digestive stage right now. If, for example, another aerospace company came in the door right now, I think we would say: 'Please wait, we haven't even finalised Hughes yet.'"

Discussions with other companies about potential deals continue, however. We at GM don't know everything and I don't see what harm there can be—and I can see great gain—in talking to people to find out what's going on and what we could do.

GM's newfound predatory instinct sprang from a change of attitude by the U.S. anti-trust authorities whose rules reach out beyond national boundaries and can snare any U.S. company involved in deals anywhere in the world. For decades GM, taking in the Chevrolet, Buick, Pontiac, Oldsmobile and Cadillac car brands, lived in fear that the anti-trust people might pounce and insist that the empire be split up into some of its original components.

But once the authorities permitted the arrangement between Toyota, largest of the

Japanese car groups, and GM for a joint venture in California—albeit with some restrictions—it became obvious that GM had nothing to fear if it attempted to grow by acquisition rather than simply organically.

GM's critics maintain that the group has paid well over the odds for both Hughes and EDS and some other purchases. Mr Smith rebuts that idea. Like an old-style wheeler-dealer he explains: "How much did I pay for EDS? I'm holding in the treasury right now close to 30m shares of EDS. I paid

all GM's computer systems can talk to one another."

GM's health care coverage—which costs over \$20m a year and was likely to double within five years—is another area where EDS has extraordinary expertise and is producing immediate benefits.

As for Hughes, Smith says it can bring to GM systems engineering expertise of the kind that enabled Hughes to contribute towards putting a man on the moon.

"In the whole history—100 years—of the automobile we

have never done a good systems job. We have had to rely on the dealer."

"I'm convinced that a lot of the advancement in automobiles in the next ten, 15 years is going to be through electronics. We're only at the very beginning of the age of microprocessors, they're in the Model T stage."

Mr Smith insists the new systems will not necessarily take the enjoyment out of driving for the enthusiasts. "Those are the people who will love the new anti-lock brakes. They will love the collision avoidance devices that will tell you, when you're backing up, the distance to the nearest object."

Of course, both Hughes and EDS will continue to serve customers outside GM and to grow in their own ways. "I think the EDS growth may come more through Hughes and EDS working together. There are still tremendous underdeveloped areas of expertise on Cadcam

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He admits it is probably time for a pause in the acquisition programme

## From GEC to Cambridge

For the second time in less than a week comes news of a life-long GEC man in the top executive ranks departing to run another British company. Roy Cottrell's face is not too well known in British electrical engineering circles these days. Since 1980 he has had a series of overseas jobs for GEC which have taken him round the world. For the past 11 years he has been in Australia managing GEC's business there.

Today Cottrell is back behind a desk in England. He has been made the new group managing director for Cambridge Instrument Company and takes over responsibility for the day-to-day running of the company from Dr Terence Gooding, who continues as executive chairman.

In a surprise appointment last week, Arthur Walsh, the head of GEC-Marconi, and a GEC man for the last 34 years, accepted the chief executive slot at STC.

Cottrell, who is 48, says he was born with an electrical screw-driver in his hand. His father ran an electrical contracting business in Wimbledon. After Kings College School, Wimbledon, and a Higher National Certificate in Electrical Engineering at the Kingston College of Technology, he trained as an engineer-manager with GEC.

He was sent to GEC West Indies in 1960, and moved up the management ladder in foreign postings, working in Burma, India, Pakistan, New Zealand, and South Africa, before being made managing director of chief executive of GEC Australia.

Cottrell's immediate job will be to help bring Cambridge Instruments to market. Plans for a stock exchange listing last July had to be shelved because of crumbling prices in the electronics sector. He says the new target date for a listing is now "sometime next year."

Cottrell was approached by intermediaries in Australia

## Men and Matters

about the Cambridge job. He said it was the international flavour of the company with its many overseas subsidiaries that appealed to him, and helped persuade him to move.

And how did GEC react to his resignation? He laughs: "We parted on good terms and the best wishes of senior colleagues."

His forward planning is that things will change on October 3 when Klaus Tennstedt conducts the London Philharmonic at the Royal Festival Hall.

Horgan's up-market Australian wine company, Leeuwin Estate, is sponsoring the concert as a Western Australian evening of European and American music. Princess Anne will be among the guests.

He says he is primarily concerned to raise funds for charity but he also nurtures hopes that while he is in London he can "educate the British to the great potential of Western Australia and to the enormous potential in the America's Cup."

He is also looking for some publicity for his fine wines among discerning European drinkers. Soundings in the London wine trade suggest a retail price around £20 a bottle for Leeuwin's white Margaret River Chardonnay. That is an ambitious level for a wine still little-known among European drinkers.

Horgan's privately-held Australian master company is Barrack House. It will be much more widely-known if his most ambitious gamble comes off. He is backing the Caru learn burn car engine technology in the

hope it will be accepted by the world's major car makers as the way to combine harsher environmental standards with high fuel efficiency.

He has invested A\$2m in the idea since its inventor, Bob Lampard, came to him 12 years ago.

Now the project has moved from Australia to the U.S. where a small development plant is being set up.

Four big motor and components groups in the U.S. and Europe have signed agreements with Morgan but he is not saying who they are.

## What's new Pushy-Cat?

A reader, Peter Roberson, of Norfolk, offers his humble apologies to Edward Lear and sends me these verses, which he calls The Owl and the Pushy-Cat:

The Owl and the Pushy-cat sent to see  
 How to raise a big floating rate note.  
 They said "It preserves the official reserves  
 We shall need for a more managed float."

For the Owl had heard from the Baker man  
 They had had a complete rethink.  
 They'd planned a concert, concerted a plan  
 To get the dollar to sink.

To get the dollar to sink.  
 "Now you know," said the cat.  
 "When I proposed that  
 They did not seem to much care."

Their own PSBR has expanded too far  
 And protection is causing a scare.  
 Now some may think we  
 Should no longer shrink

What does matters is that from the band of EMS girth. Where the currencies ride on the deutchmark tide  
 And the pound—it will find a new worth.

New worth.  
 And the pound—it will find a new worth.

The market went reeling, the dollar enfeebling.  
 But just for the space of a day.

Then they all got confused and felt battered and bruised  
 And dealers—once more—earned their pay.

Controlling money is always funny.  
 Aggregates can't be relied on.

And its tempting fates with free floating rates.  
 For they're always such fun to ride on.

Ride on!  
 For they're always such fun to ride on.

Delegates arriving in Bournemouth yesterday for the Labour Party conference might be forgiven for appearing somewhat confused.

A van was touring the streets with a billboard saying "Welcome to the Trades Union Conference."

After a momentary identity crisis they discovered that it was a Tory plot—paid for by Conservative Central Office.

Indeed the billboard was signed by the Tory chairman Norman Tebbit himself.

An accompanying leaflet being handed out in the headquarters hotel explained that giving the unions the power they wanted by voting Labour would be like electing an unelected government.

Hence, this year's Labour conference, ran the Tebbit message, was little more than a second Trades Union conference.

And, he added, "You're welcome to it."

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## Foreign Affairs: Arms Control

# A vamp act in sequins and a feather boa

By Ian Davidson

IN THE East-West diplomacy of the past 40 years, there is one iron rule which has never been broken: the Russians do not make substantive proposals which are intended to be the basis of serious negotiation and agreement.

They make specious rhetorical gestures, which sound good but mean little or nothing, or they make proposals which they know are non-negotiable, if serious negotiations take place, it is invariably on a Western, usually American, initiative. This 40-year-old rule now must be broken by Mr Mikhail Gorbachev, the new Soviet leader.

For some months the Russians have been dropping the most ineffectual hints that the act that they are about to perform on the stage of the Arms Control Theatre, will be daring, exciting and seductive, and with every week the pre-performance type becomes more breathless. Not long ago, Soviet "sources" were insinuating the idea of a 30 per cent cut in nuclear weapons; last week other, equally unnamed, Soviet "sources" raised the ante to 40 per cent. The tension is becoming quite palpable: Just How Far Will They Go?

Of course, the live performance has not started yet. The drumming, but even the curtain goes up, we may be sure that this ostensibly alluring strip-tease artist is just the good old Poliburo with sequins and a feather boa, all talk and no action. On the historical record, that is more or less what one would expect.

But this time, the advance publicity has been so titillating and so insistent, that it has become impossible to believe that there will be no follow-through. If Mr Gorbachev were now to fall to come up with an arms control proposal which on examination looked like the start of serious bargaining, it would not merely alienate those in Europe and the U.S. who believe that a deal is both urgent and achievable; he would also lose the credibility in any future negotiations in the Arms Control Theatre.

Since Mr Gorbachev can see this as clearly as anyone else, he must now, perhaps this very week follow up his vamp act with a formal proposal to the Americans in Geneva. But if he does not, why the fan dance? Why didn't he skip all the nods and winks, and get down to business in a business-like way from the moment of decision?

Two possible explanations suggest themselves. First, he may have wanted to stir up discussion in the West, to get an idea of the size and strength of the potential constituency which would favour a deal trading cuts in nuclear weapons against

cuts on President Reagan's "Star Wars" Strategic Defence Initiative. He knew there was no point asking President Reagan directly, since he has no intention of accepting the idea of such a trade; the question was, and is, whether he could be compelled to entertain it by an alliance of other political forces, in the U.S. and in Europe.

Second, this process of testing audience reaction in the West may also have been necessary for the mobilisation of political support inside the Soviet Union for the framing of a concrete offer. The armed forces and other advocates of a "strong" Russia may need to be persuaded that the advantages of a dramatic arms cut would be greater than the risks.

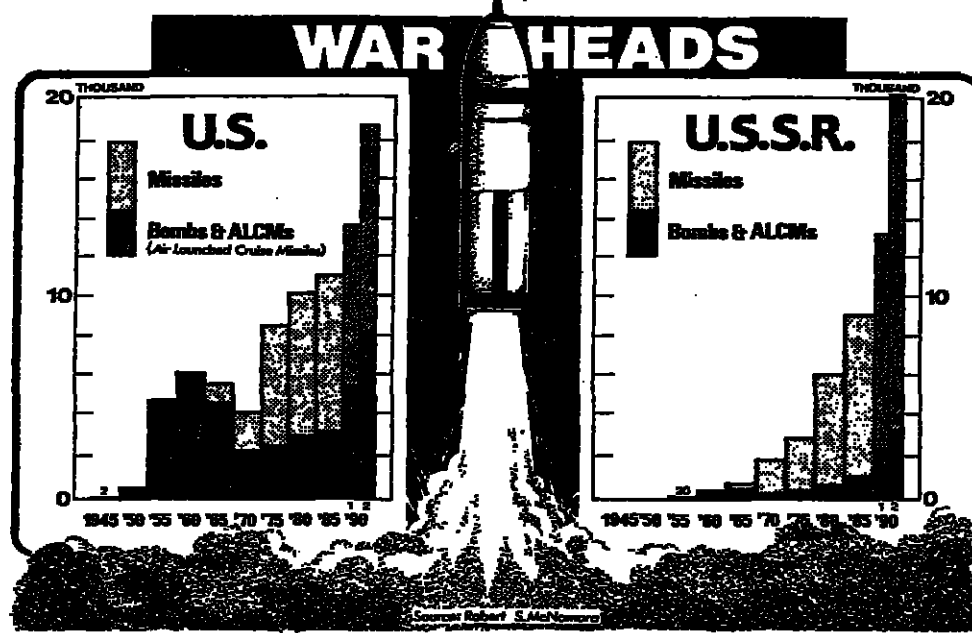
So far as it is possible to judge from the nods and winks, Mr Gorbachev seems to have edged towards the formulation of a package whose component elements might plausibly be taken to be a starting point for serious negotiation. He appears to have abandoned his initial demand, that President Reagan must simply accept everything he ever said about the Strategic Defence Initiative; instead, he is talking about restrictions on testing of "Star Wars" technologies.

He appears more prepared to meet American anxieties over the threat posed by multiple warheads on Soviet land-based missiles, by insinuating that negotiated arms cuts would be measured in warheads, not just in launchers. And if the most

recent Soviet hints are confirmed in practice, a 40 per cent reduction in strategic nuclear weapons would not merely be a dramatic offer in itself, it would have the additional merit of exceeding the one-third cut proposed by the U.S.; if Mr Gorbachev wants to enlist the applause of the Western arms control lobby, he must be able to represent his offer as being better than the Americans'.

So is the scene set for a breakthrough, for the first-ever achievement of nuclear disarmament? Nothing could be less certain. Mr Edward Shevardnadze, the new Soviet Foreign Minister, may have been quite sincere when he told the UN General Assembly last week that there was no "fated clash" between the national interests of the U.S. and the Soviet Union, and that Moscow wanted to build "normal, stable relations" with Washington; but there will be plenty of people in Ronald Reagan's America, and no doubt in Mikhail Gorbachev's Russia as well, who will decline to take either of these propositions on trust.

In any case, the Soviet proposals may prove, when or if they are tabled, to be a good deal less alluring on close examination than the advance billing has implied; that may be part of the purpose of the wind-up campaign, to distract popular attention from the fine print. Moreover, we should assume that they will contain a couple of stings in the tail which will



The first column for 1990 assumes U.S. and Soviet forces are constrained by Salt 2; the second assumes aggressive modernisation without Salt constraints.

divide the governments of Western Europe. Distracting Western voters will not be difficult. A 40 per cent cut in strategic nuclear weapons sounds dramatic, and it might even be dramatic. But with the strategic arsenals of the two superpowers at their current enormous levels, even a 40 per cent cut would still leave both with far more nuclear weapons than is required for stable deterrence.

Indeed, it is arguable that, of all the characteristics of a strategic nuclear force, the simple measurement of the number of weapons is the least important, at any rate until one gets down to very small figures indeed. The most important characteristics are, first, that the weapons should be invulnerable to attack—hence the American fuss about Soviet SS-18s and the basing mode of the MX; second, that they should be capable of reaching their targets—hence the Russian fuss about SDI; and third, that the government should have an effective early-warning and secure command-and-control system. Last comes the numbers of weapons.

The political and symbolic value of a 40 per cent cut in nuclear weapons would, of course, be immense; but it could not alter this order of priorities. Its military value would depend on where the cuts were made; if they bore most heavily on multiple warheads, they would improve strategic stability by reducing the theoretical temptation of a

pre-emptive strike against the adversary's weapons. But if the superpowers still retained 5-6,000 strategic warheads, politicians and strategists would still be free to indulge in fantastic explorations of schemes for prolonged and controlled war-fighting, whose public ventilation under the Reagan administration has done so much to inflame popular anxiety.

They would only be forced to abandon these fantasies if the numbers were reduced to much lower levels still. Mr Robert McNamara, former U.S. Defence Secretary, is among those who argue that nuclear weapons cannot be used like other weapons, and can only serve as a deterrent against attack by other nuclear weapons. For this purpose, much smaller numbers would be sufficient; he recommends a cut of 90 per cent.

But in any case, the critical figure in any serious arms deal will not be the number of weapons, but the number of years for which the agreement would run. The two Strategic Arms Limitation Treaties (SALT) of the 1970s are criticised for not having halted the arms race; but this was almost inevitable with agreements which were only intended to last for five and six years respectively, periods which are well inside the gestation of any significant weapons system.

Real arms control will require much longer-lasting agreements, precisely in order to constrain future developments

and to give both sides the reassurance of greater predictability. The merit of deep cuts would not be that 6,000 warheads is somehow safer than 10,000, but that force re-structuring (to reduce multi-warhead missiles, for example), would take a long time to implement—perhaps as long as ten years—and the new, lower levels would need to remain in force for several years thereafter. If the main factor driving the arms race is fear of what the adversary may be planning to be able to do tomorrow, rather than what he can do today, a long-lasting arms control deal may be the only way to alleviate it.

And the sting in the tail? Mr Gorbachev may be interested in mutual stability and security, but he must also be interested in improving Soviet national advantage as well. If he does offer deep cuts in strategic weapons, he will want to be paid twice—probably three times. First, with cuts on "Star Wars"; second, with a one-sided deal governing U.S. missiles in Europe, which will worry the German and British governments, but delight the anti-nuclear movement; third, with effective limits on British and French systems, which will worry Mrs Thatcher and Francois Mitterrand.

Still, these worries are for the moment only hypothetical and conditional. Mikhail Gorbachev's strip-tease has not yet begun, and we still do not have the answer to the first and most important question: How Far Will He Go?

## Lombard

## Market view of next election

By Samuel Brittan

THE CASE for taking seriously the views of the future embedded in market prices is not that these views are right, but that it is difficult to do better. Or to put the point another way: people are putting their money where their mouths are in forward-looking market prices in a way which does not apply to econometric forecasts or the armchair predictions of wise men.

Similarly there is a market in political futures, which is a few steps ahead of the poll data. This is provided by the odds that leading bookmakers put on the result of the next British election. They are better than the public opinion polls because they incorporate forecasts of how such polls are likely to move over the next two or three years and how this opinion will be translated into parliamentary seats under the bizarre British electoral system. Unfortunately, the only odds I could obtain last Friday relate to seats, not to governments. They tend to show the Conservatives catching up enough to gain the largest number of seats. But the odds suggest either that the opinion is not held very strongly or that the Conservative lead is likely to be modest.

Ladbroke's, for instance, are quoting odds on the Conservatives having the largest number of seats: Labour is quoted 5 to 4 against and the Alliance 5 to 1. William Hill gives odds of 11 to 8 in favour of the Conservatives gaining most seats and 11 to 5 against Labour, with the odds of 6 to 1 against the Alliance.

The markets are still what the City would call "thin". The weight of money behind Ladbroke's bet is about £75,000 compared with £1m expected by election day in 1987 or 1988. One single large bet the weekend before last was sufficient to push the Conservatives from slightly behind to the favourite position.

Although not as favourable to Labour as the opinion polls, the bookmakers' odds are far from discouraging to it, given that the party had only 209 seats in 1983 compared with the Tories' 397 and 53 for the Alliance. There is much to be said for these odds not to tell us. Although they

predict that the Alliance will not overtake either of the large parties, they leave all to play for in Alliance seats. They are consistent with the Alliance gaining a large multiple of their previous 23 seats or making no breakthrough at all. But the most important gap in the bookmakers' market is the lack of a book on whether the leading party will have an absolute majority or not. Mr Ron Pollard of Ladbroke's, who is the doyen of this type of betting, believes however that if there were such a book the odds would be five to two in favour of a hung Parliament. That is, no party would have a clear win.

If Dr David Owen did not exist, it would be possible to guess the next stages. Labour would try to force an early second election and would succeed because the Liberal and Social Democrat desire never to be seen to be aiding the Tories.

Dr Owen could, however, just have the ruthlessness to stop Labour drifting into power in this way.

Suppose then we had some sort of Tory-Liberal-SDP coalition, what are the financial implications? According to Prof Patrick Minford in the latest *Liverpool Economic Bulletin*, this is one reason why medium and long-term rates of interest remain stuck in the 10 to 11 per cent band.

He suggests that the term, structure of rates, "although it does not imply a strong resurgence of inflationary expectations does mean that interest rates, particularly medium dated, will remain sticky downwards."

Of course political risk is not the only factor at work. Uncertainty about the Government's policies here and now, such as those stemming from the battle on public sector pay and doubts about taxes, may also be undermining the credibility of its commitment to reduce inflation to 3 per cent and below.

It would be a bold man who could sort out the relative weight of these different forces; and direct evidence from the bookmakers is a useful supplement to what the financial markets are saying.

## UK university admissions

From Mr K. R. Wade  
Sir,—The article on UK University admissions by Jonathan Steinberg (September 25) rightly drew attention to the shortcomings of tertiary education in this country. A major part of the problem, however, and an indictment of our education system in general, is that we neglect to teach people how to use beneficially whatever skill and knowledge they may have acquired.

## Use of currency options

From the Joint Managing Director, Butler Treasury Services

Sir,—I am concerned that some of the comments in the *Lex Column* of September 23 about Flex's use of currency options to hedge overseas trading earnings might have the unfortunate consequence of dissuading other companies from the prudent use of options to cover their foreign exchange risk. In particular, I feel that too clear a distinction was drawn between transaction and translation exposure. The limitations of historical cost accounts in presenting a true economic performance of an enterprise in an inflationary climate are well-known and the translation impact of currency movements is yet another problem.

The point is that, like it or not, companies with overseas assets (and liabilities) are exposed to the economic impact of exchange rate vagaries however their accounts might be presented. Those which are risk averse normally seek to achieve balance sheet neutrality by matching foreign currency assets with equivalent liabilities, but might still be exposed to the stream of earnings those assets are expected to produce. After all, earnings represent the net effect of transactions and at some stage are expected to be turned into cash. It does not necessarily follow that all companies adopt a policy of re-investing such resources in the overseas investments which produced them. Some may be required for repatriation to meet home expenses or to cover dividends or for investment elsewhere. If they are considered vulnerable to exchange rate movements, surely it is prudent to hedge.

Contrary to the impression given by *Lex*, options remove

## Letters to the Editor

frightening, lack of commercial nous in many would-be entrepreneurs, and in more than a few established companies).

These are all symptomatic of an education system which sees the acquisition of knowledge as an end in itself and which singularly fails to impart the necessary skills and motivation to put it to good use.

A necessarily bureaucratic system cannot hope to provide vocational training (for a specific job) which matches in quality and quantity the often rapidly changing needs of a

modern industrial society. What it can and must do is to provide the ability to acquire specialised knowledge (literacy, numeracy, comprehension); the skills to use it (objectivity, creative thinking); and the motivation to do so. Fail to provide any one and you fail totally.

Primary, secondary, and tertiary levels should all include a significant amount of training in the application of knowledge in achieving set objectives. The objectives of every aspect of education (presumably a purposeful endeavour) should be clearly identified to all concerned, especially the pupils, who should be encouraged to question the relevance of whatever it is they are doing.

Tertiary training should in many ways resemble management courses, including subjects such as sales and marketing, organisation, and finance. Specific vocational training, especially in technology-based subjects, would be better provided in the form of special short courses, tailored much more closely to the needs of local industry and commerce, with much more flexible entry requirements.

In general, successful men and women from all walks of life should be encouraged to spend part of their time teaching at all levels of education. They can provide knowledge, experience, and above all inspiration to a generation which will need all it can get.

K. R. Wade,  
Jasmine Cottage,  
Riverside Road West,  
Newton Faversham,  
South Devon.

## U.S. example in higher education

From Mr James Cooper

Sir,—May I support Jonathan Steinberg's plea for change in our educational system (UK University Admissions, September 25), possibly using the United States as an illustration.

Thanks to the early decision process in most American colleges and universities you can know by the New Year of the result of your application, leaving time to apply elsewhere if disappointed.

Having had all my four children go through UK comprehensive schools and then to American universities I am not convinced that the UK produces a superior product at an equivalent age. All my children

obtained 10 O levels and three A levels, but none found his or her American academic career easy, even in maths for the daughter who obtained an A grade in English and Maths A level.

The numbers being educated at advanced levels speak for themselves, particularly in technology. I suggest that neither in quality or quantity are we outstanding. Even worse is our performance in manufacturing and skill training. The numbers taking apprenticeships in engineering are at best only one-third of 20 years ago. There are increasingly shortages of skilled people even in areas of high unemployment. What difference is there between a citizen of this country and one from the Third World?

James Cooper,  
Managing Director,  
Wickham Engineering Co.,  
Ware, Herts.

## A consensus on non-proliferation

From Dr J. K. Leggett

Sir,—You point out in your editorial of September 26 that "... the view that the U.S. does not want to call a halt to testing until it has completed tests on its next generation of nuclear weapons..." appears to contain more than a grain of truth. True, but you fail to mention that the UK is in the same boat: the Trident warheads, designed by Aldermaston and built at Burghfield, must undergo a series of tests in Nevada.

You mention that "... the inadequacy of verification technology..." is advanced by the U.S. and UK as a reason for not negotiating the comprehensive test ban treaty which the Soviet Union and the non-nuclear signatories of the Non-Proliferation Treaty are so keen on.

You correctly comment that this view attracted criticism on scientific grounds from several prominent non-nuclear Western nations at the NPT Review Conference in Geneva last week. Small wonder: most scientists concerned with verification technology view the U.S. and UK protestations as an excuse, not a reason.

Accordingly, your comment on the final resolution of the NPT Review Conference is totally misleading. You say that "... the wording of the final document was sufficiently fudged to let the Western nuclear powers off the hook on the CTBT..." In fact the final communiqué instructed the nuclear powers to begin CTBT negotiations without delay.

Were this to happen, the UK Government would have to come to the table hopelessly compromised over Trident. J. K. Leggett,  
Imperial College of Science and Technology,  
SW7 2BF.

# THE INVERGORDON ENTERPRISE PACKAGE.

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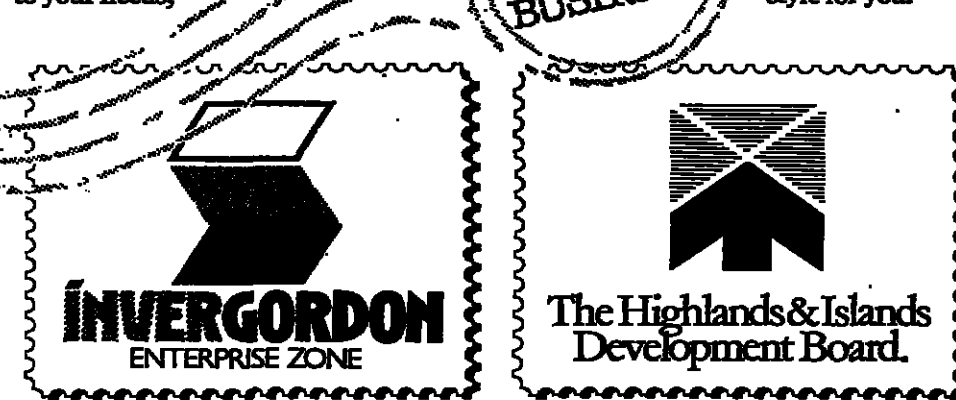
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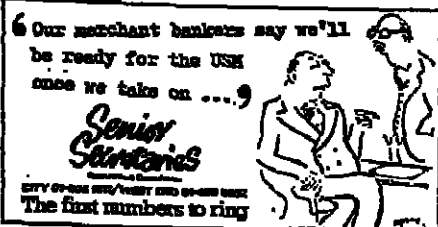
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on Wall Street

## Predators find taste for foods

THE TERMS of the proposed merger of Philip Morris and General Foods, in themselves a dramatic climax to a fortnight of heavy takeover speculation, have set the stage for further excitement in Wall Street's food industry stocks.

Hopeful speculators had already bid up stock prices in several well-known names. Pillsbury - regarded as an alternative target for Philip Morris - Quaker Oats, Kellogg, General Mills, Borden, all attracted attention.

Since it was no secret that there were plenty of alternative suitors interested in General Foods, the speculative pressure on the other food stocks is unlikely to lessen.

At \$3.8bn in cash, the Morris-Foods merger is among the top 10 of a U.S. merger list dominated by the huge oil-industry bids of the past five years. The earnings multiple offered for General Foods may be fitting for a premier world food marketer, but it has lit up the eyes of the Wall Street predators.

The food sector in general has been a latecomer to the New York takeover scene. Despite such deals as the \$4.9bn takeover of Nabisco Brands by R.J. R. Reynolds, the \$2.9bn purchase of Carnation by Nestlé and the \$2.7bn purchase of Esmark by Beatrice Companies, many other household names in the industry lay dormant until quite recently.

That was in part because the household names themselves began to sound a little old-fashioned. Quaker Oats, Kellogg's Cornflakes, or Shredded Wheat failed to excite stock markets as personal computers and similar electronic wizardry.

But the balance has been restored as Wall Street has recognised the skill of the food companies in building brand names, moving into fast-foods and exploiting the new markets for natural or nutrition-enriched products.

Over the past five months, food-sector stocks have risen by about 18 per cent, while the Standard & Poor's 500 index has gone virtually nowhere. Eighteen months ago, the market valued General Foods at a mere 40 per cent of the price finally agreed to by Philip Morris at the end of last week.

But, with Philip Morris now willing to pay just over 19 times existing earnings for General Foods, the ante has been raised significantly. Not even the most active of the sector's takeover favourites has yet discounted such a valuation in the market place.

Pillsbury, the Minneapolis-based convenience food producer, grain miller and Burger King operator, has been the most active speculative feature of the past week. Two thirds of its earnings come from the restaurant franchises, which have proved a faster growth area than the food business. Consequently, the shares already trade at a price-earnings ratio of 1.49 per cent of that on the Standard & Poor's 500 stock index.

But even at \$50.75, the last price before Hurricane Gloria closed down Wall Street on Friday, the stock has about \$20 to go to equal the rating put on General Foods by the Morris tender offer, even on existing earnings. If Wall Street predictions of a 14 per cent gain in earnings this year are realised, then a serious bidder may have to pay into the high \$80s.

Pillsbury is a favourite for a bid because its restaurant businesses - Bannigan's and Steak & Ale, as well as Burger King - would presumably benefit from a buyer with deep pockets, able to expand by modernising existing premises and acquiring new ones. But Philip Morris is not the only cash-rich company looking for a consumer-company acquisition.

Only a tiny percentage of the Pillsbury equity is insider-held, so the stage may be already set for Wall Street's next takeover drama. Quaker Oats also a favoured takeover spot last week, is similarly situated, with its stock price of \$55.40 on last year's earnings of \$3.76 per share looking undervalued after the General Foods-Morris announcement.

Quaker Oats is in the process of a stock-buying programme, which means an increase in net share earnings of about 13 per cent this year.

The list of potential bidders for food companies is a long one indeed. Rivals for General Foods were never disclosed, but insiders named Unilever, suggesting that only the preoccupation of the Anglo-Dutch giant with Richardson-Vicks had kept it out of the final race. Nestlé, buyer of Carnation, is thought to be on the lookout for another U.S. acquisition.

If uncertainties over corporate profits continue to depress Wall Street's industrial stocks, then the food sector might be the one to watch between now and Christmas.

Philip Morris diversifies, Page 21

## Gatt hopes to avoid rift over trade in services

BY WILLIAM DULLFORCE IN GENEVA

HOPES OF avoiding a rift between the industrial and developing countries at the start of today's meeting of the General Agreement on Tariffs and Trade (GATT) on a new round of multilateral trade negotiations revived slightly yesterday.

Consultations orchestrated by St Felipe Jaramillo, the Colombian chairman, and Mr Arthur Dunkel, the Swiss director-general of the GATT, opened up the possibility of a compromise over the wording of the agenda which would prevent an immediate breakdown over the controversial issue of trade in services.

Yesterday's discussions were limited to a small group of heads of mission representing leading protagonists from both sides. Final agreement on the agenda, it was understood, might have to wait until the arrival last night and this morning of heads of delegation.

The special three-day session of GATT's executive committee has been called at the instance of the

U.S. and with the backing of 84 countries. It takes place only seven weeks before the regular annual meeting of GATT.

The U.S. took this unusual step in order to break a deadlock in the GATT Council in July which prevented the establishment of a committee of senior officials to prepare for new trade negotiations next year.

The deadlock arose over the U.S. insistence that the new round must incorporate negotiations on services as well as on goods. The European Economic Community, Japan, most industrial countries and some developing countries supported the U.S.

A hard core of five developing countries - Argentina, Brazil, Egypt, India and Yugoslavia - has led the opposition to the inclusion of services.

Their position reflects developing country fears that the industrial countries will seek concessions on services in return for action to open

up trade in goods, to which they are already committed under previous negotiating rounds and under the GATT work programme agreed in 1982.

The hardline developing countries have threatened to contest any agenda for today's meeting which suggested that services would form part of new trade talks.

Comments by U.S. officials last week indicated that Washington's impatience over this procedural block was growing and that the U.S. might be prepared to force through a majority vote which would break GATT's tradition of proceeding by consensus.

Any compromise on the agenda emerging from the last-minute consultations yesterday and this morning will leave the U.S. free to raise the issue of services and at the same time make it clear that no country is committed in advance to negotiating on services.

## Call for probe into London riot rejected

By Lisa Wood in London

MR DOUGLAS HURD, the new British Home Secretary, yesterday rejected a call by the opposition Labour Party for a public inquiry into the arson and looting in the south London area of Brixton on Saturday night in which 10 policemen and 43 members of the public were injured.

London police, backed by Brixton residents, yesterday claimed that opportunists seized upon the anger over the police shooting of a local resident, Mrs Sherry Grace, as a cover for the riot and the subsequent 197 serious crimes (of which 58 were burglaries) in the area at the time.

Shopkeepers, however, criticised the police for not taking more prompt action to stop attacks on both white and black-owned properties.

The disturbance began around 5.30pm when a 150-strong crowd gathered at Brixton police station protesting about Mrs Grace. Subsequently petrol bombs were thrown. Outbreaks of violence then continued within a half a mile radius of the station until after midnight.

Four buildings were seriously damaged, two gutted and 55 cars damaged.

London police said the disturbances were not as serious as the 1981 riots in Brixton when 300 policemen were injured and more extensive damage caused to property, particularly in Brixton High Street and Balham Road, the nucleus of the disturbances.

The Independent Police Complaints Authority is to supervise an investigation, led by Mr John Doolittle, assistant chief constable of West Yorkshire, into the accidental shooting of Mrs Grace who is said to be "seriously ill but stable".

Her house was raided by police on Saturday morning searching for Mr Michael Grace, aged 17, wanted for questioning in connection with a £10,000 (£14,000) armed robbery in Hertfordshire on September 10. On Thursday, Hertfordshire police sought Mr Grace at a London address. A shotgun was fired but the assailant is unknown. Last night Mr Grace gave himself up to south London police.

Deputy Assistant Commissioner Richard Wells, speaking at a press conference at Scotland Yard yesterday, said: "Following our tragic shooting of Mrs Grace, feelings began to run understandably high in Brixton, with marked hostility towards the police."

He said these "genuine feelings" were taken up by others who "knew little" of the background to the incident with rumour spreading rapidly that the injured woman had been shot twice in the back, which he said was incorrect, and that she had died. "The spread of these rumours," said Mr Wells, "fuelled existing anger at the police."

"At the same time, substantial numbers of opportunists profited from the occasion and from the distress and high-rising feelings of others, not simply to protest or to demonstrate, but to loot - which we could understand - but to indulge in acts of wanton damage to property and injury to innocent citizens."

Police, he said, tried to find a balance between a level of policing that did not provoke hostility but at a level that contained sporadic violence. "With difficulty, that balance was achieved by a planned upgrading of response."

Police, he said, had to rebuild links with the community.

Several people in Brixton, however, yesterday accused the police of taking a too low-key approach during the day.

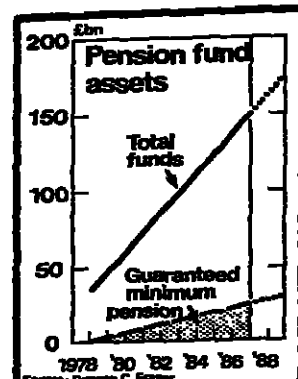
Hundreds of people, both black and white, including Richard's 16-year-old daughter, yesterday unanimously condemned the police shooting but claimed it was a spark to frustrations among the area's unemployed who took the opportunity to grab jewellery and stereo equipment.

One middle-aged black man, a builder, said: "They have not got anything, a lot of these youngsters, so they take the opportunity to grab it." He claimed many outsiders flocked to the area as tensions built up during the day. The area has a male unemployment rate of 25.8 per cent with that among young blacks estimated to be double that figure. It also has the second highest incidence of one-parent families and a disproportionate number of old people in its population, which has dropped heavily over the last 10 years.

## THE LEX COLUMN

## Fowling up the markets

As the last submissions on the proposed abolition of Britain's state earnings-related pension scheme (Serps), trickle in to Mr Norman Fowler, Social Services Secretary, much has been made of the impracticalities and inadequacy of its private replacements. But just as interesting are the financial implications of scrapping Serps. Duncan C. Fraser, the firm of actuaries, claims that up to £25bn could be taken out of financial markets and returned to the Government in 1987 alone - enough to fund three years of public-sector borrowing requirements - and as much as £1bn a year could change hands thereafter.



ty for selling capital assets to fund current expenditure, it somehow seems unlikely that the money would simply be put away for the benefit of future pensioners. Although whichever Government is in power by 1987 will have to pay out up to £25bn a year in Serps pensions, 40 years is almost too long a time to contemplate in politics.

The £1bn a year would at least help to offset the decline in oil revenues by 1987, while the cash from past contributions would be more than enough to fund any vote catching cuts in income tax. If it were to be used for current expenditure at all, however, a cut in National Insurance contributions might be more appropriate, since this generation of workers will by then be paying for both present and future generations of pensioners.

Alternatively, the money could purely reduce the public spending borrowing requirement, allowing interest rates to fall in the pre-election year. Presumably the 39 new gilt-edged market-makers would not be happy, though, if the Government were to kick the habit of issuing gilts. If the stock market were indeed devastated by a pension-fund sell-off, future privatisations would be hard to organise - but then, ideology aside, the Government would not need the money, anyway.

All this must surely be no more than speculation. Although any government might secretly welcome a windfall, this manna from heaven goes counter to the whole idea of Serps - that pensions should be provided by the private sector. Besides, the possible disruption to financial markets is not something the Government would shrug off lightly.

### Distortion

If it is determined to go ahead with the abolition of Serps, despite vociferous opposition, it will have to change the rules to stop money flowing back to the state. The National Insurance rebate for GMP contributions will have to be substantially higher; at least close to the 8 or 9 per cent break-even point. Short of changing the law under which schemes contracted out in the first place, the only way to stop the lump sums moving back is to make the terms financially too unattractive to consider; a matter of creating one distortion in order to offset another.

## Kinnock seeks to avoid Labour split over reimbursing miners

BY PETER RIDDELL AND JOHN LLOYD IN BOURNEMOUTH

LEADERSHIP of the Labour Party in Britain was last night making strenuous efforts to avoid a bitter split over any commitment by a future Labour Government to reimburse the miners' union for all costs and penalties incurred during its year-long strike over pit closures, which ended in March this year.

Mr Neil Kinnock, party leader, was at the weekend staking his authority as party leader on an issue he presented in stark, almost moral, terms. He said: "Reimbursement is not acceptable because it would be completely wrong for us - however much we dislike it - to try to guarantee a system of repayment for offences committed which at the time were illegal."

The issue appeared to overhang all other subjects to be discussed at the party's annual conference, which opened in Bournemouth yesterday.

On Wednesday, the conference will be asked to approve a motion from the National Union of Mineworkers (NUM) that calls for a review of all cases of miners jailed as a result of offences committed during the dispute, reinstatement of all dismissed miners and reimbursement for the NUM.

An identical motion was narrowly approved four weeks ago by the Trades Union Congress. Mr Kinnock elevated the importance of the matter by saying yesterday that he wanted to reply to the debate on Wednesday, in spite of the possibility of a personal rebuff if the motion were passed.

His stand provoked strong criticism yesterday from leaders of the party's hard Left particularly at a heated six-hour meeting of the national executive committee.

Mr Kinnock said acceptance of the motion would "involve saying to people who transgressed the law, at

some future date, that another government will pick up the tab. No serious government could do that, or should do that."

He made clear in a television interview that his objections to reimbursement retrospectively also applied to councillors, including those in Liverpool, who are involved in a budget dispute with the Government.

Mr Arthur Scargill the NUM president, showed no sign whatever of making concessions to the party leadership. He said after a two-and-a-half hour meeting of his executive yesterday that the motion "will stand - and a delegation will be calling for maximum support for a policy which is not only the NUM's but the TUC's as well."

Mr Kinnock faced further embarrassment yesterday when the national executive decided by a narrow margin to support a motion promising fully to compensate local councillors for any losses resulting from non-compliance with the law. That was identical in substance to the spirit of the miners' motion on reimbursement to which Mr Kinnock objects.

Late last night negotiators from the NEC - Mr Alan Hadden, the party chairman, Mr Sam McCuskie, the treasurer, and Mr Larry Whitty, the general secretary - were attempting to secure a compromise - probably on the basis of agreement by the NUM to replace the motion by an NEC statement of strong, if unspecified support.

At the same time, there were some signs of wavering in union support for the NUM. Mr Scargill had lost 122,000 votes of the white-collar union ASTMS some days ago and yesterday, the pit union Soget 82 also voted in its delegation to support Mr Kinnock.

The 600,000 votes from the National Union of Public Employees

might swing behind a compromise - but probably only if it were acceptable to the NUM. Mr Albert Williams, general secretary of the building workers' union, argued passionately for a switch in its position of support and lost by one vote in his 24-man delegation.

A proposal to meet the NUM was put forward by Mr Roy Hattersley, the deputy leader, and backed by Mr Kinnock, who said the issue was really about whether they elected a Labour government. He claimed that there was no one on the NEC who did not know in their stomachs that what the opinion polls were saying was true, and was borne out by the comments of solid Labour supporters.

The calculation of Mr Kinnock's advisers is that a strong stand will impress the electorate even if there is the serious risk of the conference not supporting him on this particular issue.

Mr Kinnock was attacked yesterday by both the hard Left and normal anti-Left allies. Mr Tony Benn challenged Mr Kinnock's view that he had to be able to defend everyone in the party election manifesto. Mr Benn asked: "Will it be our conference or just a vehicle for a leadership drunk with power and puffed up by ambition?" - a reference to Mr Kinnock's own words about Dr David Owen, the Social Democratic Party leader.

From the soft Left, which has normally supported Mr Kinnock, Mr Peter Hain told a meeting of the Labour Co-ordinating Committee that Mr Kinnock could not lose the party "Bambi style." He had got to lead by consent.

Mr Whitty writes in a newsletter that Labour "still has a credibility gap that it needs to overcome."

Kinnock backs ballot fund, Page 7

## BA in 'lone push for flexibility'

BY TONY JACKSON IN LONDON

BRITISH AIRWAYS says it will push ahead alone for greater liberalisation in European air fares and services. The move is seen as a breach in the previously united European airline industry.

Disagreement surfaced at a meeting of the Association of European Airlines in Brussels on Friday held at the instigation of the EEC Transport Commission, which is seeking to liberalise air transport in Europe.

British Airways (BA) said the participants failed to agree a joint approach on the commission's proposals.

Mr Colin Marshall, chief executive of BA, said: "We are disappointed at the limited extent to which the European airlines are able to respond positively to the need for a

more liberal and flexible air-transport system in Europe."

BA agreed yesterday that there were few concrete measures it could take on its own. However, it said it would give more public support to moves by the British Government which, in the past year, has reached agreements with the Netherlands and Luxembourg to liberalise air traffic.

The UK carrier said: "The airlines which favour change are ourselves, British Caledonian, Aer Lingus and KLM. BA has become more efficient, but some European airlines which have not still favour old-style protectionism of a kind which is against the law."

"We do not necessarily want to reduce air fares across the board."

However, in poor summer weather such as last month it would have been ideal to be able to offer special cut-price deals to the Mediterranean.

"Under the present system, a cut-price offer for August would not have obtained approval until next January. We think that is ridiculous, and so does the EEC."

At the Brussels meeting of the association, BA argued that if the industry did not agree to liberalisation, it would be enforced by the EEC in favour of the industry would dislike.

"The Friday meeting was a watershed," BA said. "It was the last chance for the airlines to present a united front on changes which are going to be imposed on them anyway."

## Hussein offer divides Israel

Continued from Page 1

and its sympathisers in Congress to end the deal.

In contrast Mr Yitzhak Shamir, the Foreign Minister who is also leader of the Likud said there was "nothing new" in the speech.

Mr Moshe Arens, Minister without Portfolio and also a member of Likud, said on Israeli radio that "those who react with enthusiasm to Hussein's words did not read everything he said." He pointed to King Hussein's call for an international conference and Soviet participation, in particular.

## World Weather

Area	Temp	Wind	Area	Temp	Wind	Area	Temp	Wind	Area	Temp	Wind
Amman	26	10	London	18	10	Madrid	26	10	Paris	22	10
Algiers	26	10	Lyons	18	10	Rome	26	10	Seville	22	10
Athens	26	10	Munich	18	10	Stockholm	26	10	Warsaw	22	10
Bahia	26	10	Nuremberg	18	10	Zurich	26	10			
Bombay	32	10	Oxford	18	10						
Buenos Aires	26	10	Perth	18	10						
Calcutta	32	10	Port of Spain	26	10						
Cairo	26	10	San Jose	26	10						
Canton	26	10	Singapore	26	10						
Cebu	26	10	Sydney	26	10						
Dacca	26	10	Taipei	26	10						
Dhaka	26	10	Tokyo	26	10						
Hankow	26	10	Yokohama	26	10						
Hong Kong	26	10									
Kobe	26	10									
London	18	10									
Lyons	18	10									
Madrid	26	10									
Munich	18	10									
Nuremberg	18	10									
Oxford	18	10									
Perth	18	10									
Port of Spain	26	10									
Singapore	26	10									
Sydney	26	10									
Taipei	26	10									
Tokyo	26	10									
Yokohama	26	10									

Readings at mid-day yesterday.

W - Windy, D - Drizzle, F - Fog, T - Thunder, S - Snow, X - Storm, Y - Thunder

## Marketing by design

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## FINANCIAL TIMES SURVEY

Europe's 53m office workers face unprecedented changes in their working environments as the decreasing cost of computers and the increasing cost of people tempt managements to buy more and more technology.

## New emphasis on integration

By MICHAEL WILTSHIRE

DESPITE RECENT setbacks in the international computer market, the office equipment industry in Europe and the U.S. is buoyant. Suppliers in the UK's £5.5bn market—the world's second largest after the U.S.—are now more optimistic about the general business climate than they were six months ago, with more than 70 per cent reporting an increase in orders.

Among member companies of the British Equipment Trade Association, 60 per cent have taken on more staff this year and 47 per cent of companies also report increased export sales in the last six months, although the majority of suppliers are still heavily reliant on meeting the needs of 360,000 offices in the UK market.

The office automation equipment market was booming in Europe until the end of 1984—then came the slowdown in high technology sectors. The total text processing market in Europe grew from £210m in 1980 to £3.2bn by last year—the growth rate was a ridiculous 1,400+ per cent, a recent Wharton market report said.

Lower prices were a factor in the sudden downturn in revenue, but a less obvious factor is the need for better control of organisational costs. Until computers began to be connected, with access to servers, databases, with more sophisticated applications and so on, the high growth rates will remain elusive, the report suggests.

## Convergence

Users are becoming far more aware of the need for the integration of equipment, particularly with the convergence of computers and communication technology. Anyone buying pieces of the electronic jigsaw without carefully considering the future role of each item will soon regret the decision.

"Convergence has a new meaning," says Dr Nigel Horne, director of corporate development at STC and a director of ICL. "It now includes the gathering, dissemination and even interpretation of information. The consequences for suppliers and users alike are profound if they are to ensure their competitiveness for the future."

The first real change in the office world in recent years was the arrival of the calculator, which is now almost universal—it is estimated that there are 20m of them in use in the UK alone.

Then came computer terminals and word processors. They were followed in about 1980 by electronic typewriters and, most recently, by personal computers. All this has led to a dramatic turnaround since the mid-60s

## OFFICE EQUIPMENT



THE FIRST typewriter to be manufactured in Britain for ten years is checked at Brother Industries' plant in Wales, where the Japanese group is investing £10m in facilities to produce 240,000 electronic daisy-wheel machines a year. Brother's AX-10 machine is being checked here by Mr Masao Kato, managing director of the UK project and Mr Malcolm Neuman, general manufacturing manager. (Typewriter market: see page 4).

when in the U.S., for example, it was claimed that equipment investment for factory workers was then ten times that of the investment for office staff. Today the gap is closing fast.

In the personal computer market, sales in Western Europe are forecast to grow five-fold by 1990, when personal systems worth more than £8bn will be sold each year, according to the latest survey by market analysts, International Data Corporation.

By the end of 1987, Olivetti estimates that four out of 10 among Europe's 53m white

collar workers will be equipped with an electronic workstation, either stand-alone or connected in a departmental or corporate system.

Despite the slowdown in high technology, the European market potential in the office automation industry is still vast when one considers that:

• Europe employs 6m typists, but only 250,000 of them as yet have a word processor. About 350,000 of these typists have a personal computer, dedicated to word processing.

• Only 3m of Europe's typists

use an electronic typewriter, the majority of which are little different in performance from the previous electro-mechanical models.

• Europe's 13m clerks are using 3m personal computers. There are about 650,000 personal computers in use on a walk-up, shared basis.

• Government departments and commercial sectors employ about 19m white collar executives in Europe, but they are still largely untouched by the developments of office automation.

About 100,000 professional workers—for example, engineers with a well-defined job functions, or actuaries in insurance companies—are now using personal computers. But line managers, and particularly those whose responsibilities are "task-driven," need access to a number of different and probably separately structured databases. They also need systems to provide the definitions of the records in the database, when it was last maintained, and how to use the packages to manipulate the information.

## IN THIS SURVEY

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Small service organisations in Europe—groups such as medical and legal practices—employ about 5m professionals using around 250,000 "twilight" microcomputers which can be considered expensive hobbyist machines, but which are also used to maintain accounts and produce correspondence.

There is a large and rapidly growing market for replacement machines, in addition to the added-value server products, such as electronic mail, electronic filing, advanced printers, and so on, says Wharton. Given this almost limitless market potential, it may therefore be a surprise to learn that according to Trade Indemnity, the UK's largest credit insurance agency, insolvencies in the automation supply field almost doubled in 1984.

Their analysis showed that some of the smaller distribution companies could not sustain the pressure of IBM and Apple's price cuts. Some of the small software suppliers found the pressure of standard packages, plus the greater purchasing power and retelling muscle of the large marketing organisations, irresistible.

Although the market looked so large and inviting, the missing elements among a lot of entrepreneurs were correct marketing and cash flow.

Electronic typewriters are a major contender to become the desk-top workstation, since the typewriter—along with the portable computer—is the most basic entry point into office automation. This is the reason there is so much market activity in this area. But in

Europe the electronic typewriter sector is "experiencing something of a watershed—sales are up and have reached a steady state where they are now selling in the numbers at which previously electro-mechanical models and manual machines were replaced in the 1970s," says Wharton.

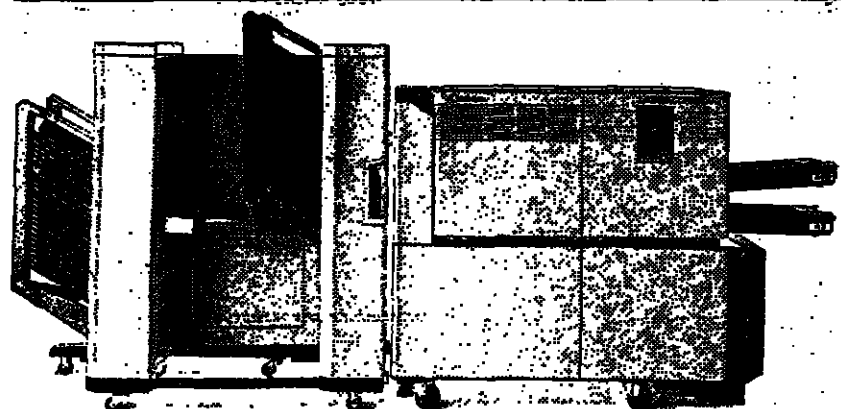
## Imports

Last year the UK imported more office typewriters from Japan than from either Germany or Italy. The EEC has taken action against what was perceived as Japanese dumping of electronic typewriters into Europe—the result, however, was that some companies stockpiled and thus distorted import figures: some increased prices in the hope of persuading the EEC that they were not dumping; and some, such as Brother (in the UK) and Canon (in France) moved more strongly towards European production.

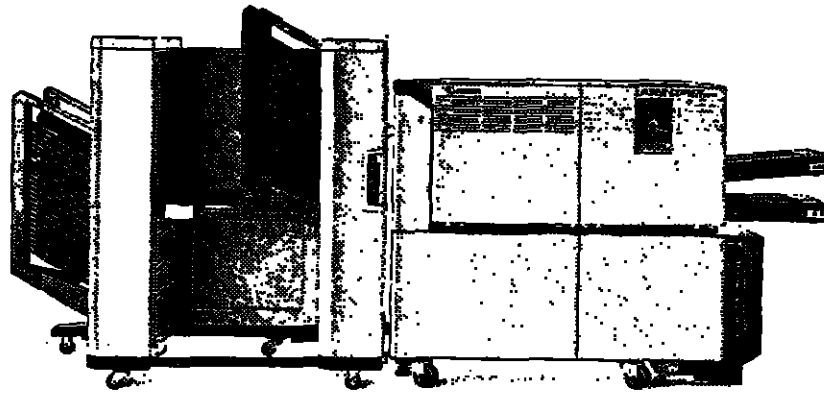
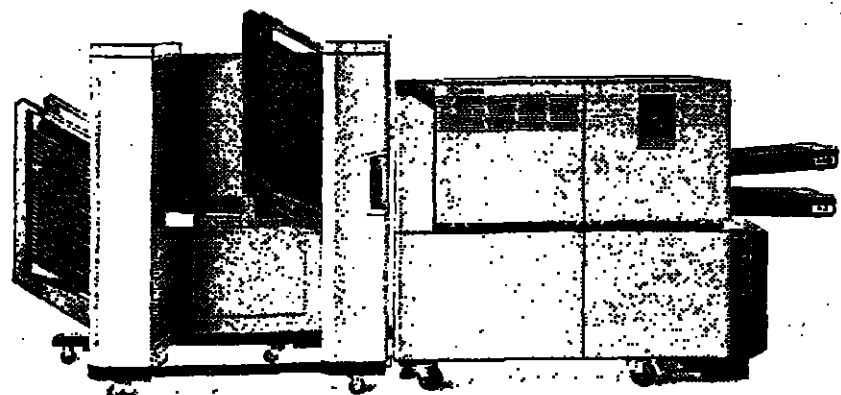
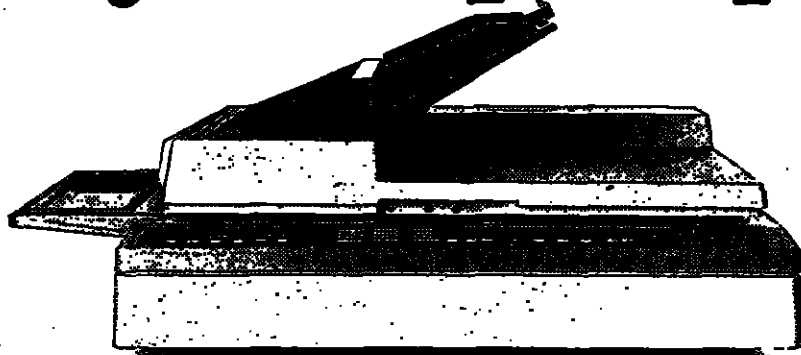
Now a new dumping row is being focused on the copier market, after complaints from the Committee of European Copier Manufacturers in the EEC. Meanwhile, a number of UK manufacturing groups are seeking to counter foreign imports. The new British Office Technology Manufacturers Alliance, for example, is urging UK office managers to buy British computers and bolster annual sales of about £1.5bn.

Integration of office systems is clearly the way ahead, with networking becoming increasingly visible in the European

CONTINUED ON PAGE 8



"This is your copier speaking."



To compare the Canon Laser System to a conventional copier is a bit like comparing Concorde to a jumbo jet. As you can see, the Laser is a discreet modular system, not a gigantic console with a few bolt-on extras. It uses the latest digital technology to fly through your copying jobs literally at the pace of a laser. The complete system which you see here can reach speeds of up to 180 copies a minute. And since it has yet to take to the skies, this makes it the fastest copier on Earth. The Laser is also the World's first intelligent copier. Its intelligence is based on the scanner's ability to convert an original into a digital electronic signal. This signal can then be processed, stored or transmitted to the printer by cable. The printer uses a pinpoint beam of laser light to translate the signal back into a high resolution image. With its umbilical cable the scanner can sit above the

printer or stand up to five metres apart. It can also control up to four printers. This in turn makes it one of the most reliable copiers, since if one printer stops, the others aren't affected. The Laser is also the most versatile copier yet made. It offers an impressive array of intelligent and automated features not found on conventional copiers. It can turn white into black and black into white and identify 64 gradations of tone. It can copy the facing pages of a book masking out unsightly gutters and black edges. It can automatically zoom in to enlarge up to 200% and out to reduce down to 50%. And like a word processor it can edit by framing, blanking and shifting position. But most of the time all you need to do is position the original in the automatic feed and press the start key. The machine then automatically selects the right size

paper, or the correct magnification and ideal exposure. What's more, all your most frequently used copying jobs can be stored in a multimemory programme. There are a number of Laser systems for you to choose from. You can start with one printer and one scanner and work up to four printers and four scanners. Tomorrow the system will play an important role in office automation as a local copier network. It has the potential to revolutionise the office as part of a completely automated electronic publishing and filing system. Canon have been market leaders since 1982, with one of the largest direct and dealer networks in the UK. To help you further, we've recently set up a new company, Canon Finance Ltd. Because a copier that's built like Concorde, is obviously going to cost a little more than the average jumbo,

Please send me full details of the Laser Copier System. Canon (UK) Ltd., FREEPOST, Canon House, Manor Road, Wallington, SM6 1SR. Or dial 100 and ask for FREEPHONE Canon (UK) Ltd.

Name \_\_\_\_\_ Position \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
Postcode \_\_\_\_\_ Tel No. \_\_\_\_\_

**Canon**

Laser Copier Systems. We'll help you look good on paper. MANUFACTURERS OF COPIERS, SCANNERS, ELECTRONIC TYPEWRITERS, CALCULATORS, COMPUTERS, INSTRUMENTS AND MECHANICAL EQUIPMENT

## Office Equipment 2

Copier war intensifies as machines interface with computers

## Battle for the desk-top market

Copiers  
CHRIS WILSON

WITH MORE than 150 different models of photocopiers now available to buyers, the competition among suppliers is intensifying in a race to offer new features at the touch of a button.

Laser, fibre optic, digital and colour-copier technologies are transforming the once-humble copier into an information recording and distribution system, while features such as zoom enlargement and reduction, double-sided copying, collating and automatic document feed are now commonplace.

Following its invention 30 years ago, the basic office copier seemed to be progressively overshadowed by the computer revolution which, in turn, saw the arrival of the personal computer (PC). But less noticeably, a revolution in reprography was also going on in recent years which has now brought with it its own PC—the personal copier.

Before the advent of the microcomputer, copiers could do little more than copy, i.e. produce a reproduction of the original, with varying degrees of success. There was little else available in the way of even

basic editing functions. But, today, copiers are bristling with new facilities that allow the user to do almost anything with the original image before producing a final print.

The most elementary change that one can make to a document is the size, and a large proportion of the new copiers on the market feature changeable reproduction ratios. On the basic models there are just one or two enlargement and/or reduction modes, while for a little more money there are now several handfulls of machines with zoom lenses which in effect provide 40 or more reproduction ratios—all on one machine.

At the other end of the market, there are products such as the Canon laser copier which allows the user to stretch and squeeze images via an independent control of vertical and horizontal axes. Users can also mask parts of the original, shift certain elements, reverse images, black for white. An increasing number of machines will also produce copies in any colour desired: black, blue, brown, red, green and even sepia.

The rush to incorporate such new facilities, as well as labour-saving devices such as sorters, document feeders, automatic paper selection systems and auto-duplexing (double-sided copying), has brought with it a new intensity to the market-place.

In its mildest form, this

manifests itself in the sheer number of claims by the manufacturers to have created a "first." Canon's laser copier, for instance, was "the first commercially available digital copier on the British market." Mita recently claimed "the first desk-top zoom copier with three paper cassettes." Lion launched a new Toshiba machine, said to be "the world's first digital full-colour desk-top copier" and Ricoh says that its new colour 5000 machine is "the world's first full-colour plain paper copier to offer reduction and enlargement."

## Imports

At its most intense, however, it is an international copier war with the most recent battle being the complaint by European copier manufacturers that Japanese producers are dumping their products within the EEC.

Ironically, four of the five complainants source some of their products from Japan: Rank Xerox through its Fuji-Xerox joint-venture, Oca and Develop from Mita, and Olivetti from both Konishiroku and Toshiba. (The fifth complainant, by the way, is not well known in the UK: it is a French company called Tetras.)

This sourcing is, of course, nothing to worry about; it merely serves to highlight the fact that an estimated 85 per cent of copiers sold in Europe are of Japanese origin. Several other top copier suppliers also brand Japanese-built machines: Infotec's and Nashua's products are made by Ricoh; Kodak and Agfa-Gevaert have recently signed agreements to brand Canon machines; and Mita supplies a whole host of European copier companies.

Clearly, then, if dumping is deemed, by the European Commission, to be taking place, the levying of import duties on Japanese copiers could have a telling effect on the sector, perhaps raising prices to the end-user by as much as 10 per cent. The outcome is unlikely to be known, however, until late next year.

Meanwhile, the market may see the results of other actions which are currently being pursued in British courts to call a halt to the sharp practices of some copier dealers and one or two suppliers. Indeed, malpractice can become one of the biggest problems facing the

unsuspecting buyer today. There is no longer a great deal of difference between many makes of machine: the difference is in the supplier.

There are several factors about which the user should be wary when buying a new copier. Cost-per-copy is a particularly important point: some suppliers quote incredibly low copy-costs which they later prove unable to maintain. Others are eager to sell obsolete equipment, even at higher prices than more modern equivalents. And the last thing that users want is to choose a dealer who is likely to go out of business at the end of the month.

Although it would appear easy to become entangled in a bad deal, it should not prove too difficult to find a good supplier with adequate back-up facilities; rest assured, there are plenty of good dealers about. Once a prospective buyer has found the right supplier, the choice of machine is then not too difficult. Remember that the best dealers are not so much high pressure salesmen as consultants: they assist users to choose the right machine, rather than merely "sell a copier."

## Advances

Obviously, buyers should be careful not to be tempted by all the "bells and whistles" found on many of today's machines. Buyers should carefully define their needs before selecting a copier: do not buy a fully-featured machine and then try to find uses for its many functions. Special features are likely to interest certain users more than others. The most sophisticated image-manipulation techniques, for instance, are likely to find the widest appeal in creative departments, such as advertising agencies.

In the past five years photocopier developments have come a long way, but in the next five years they will advance even faster. At one end of the scale, the market will see many of the recently developed features working their way down the market to desk-top and even personal models, while at the other end of the scale we are likely to see more as yet unthought-of developments to tempt the buyer.

Visitors to the latest Hannover Fair will have had a better idea than most of what to expect in the future, although the less-travelled British buyer may

have deduced plenty of details at the recent Copiers '85 exhibition. At this London show, Mita gave a preview of a machine offering editing functions on a grid-type keypad, while Panasonic showed an editing add-on for its own copiers.

A key indicator of things to come, however, must surely be Canon's laser copier. Apart from its impressive array of editing functions, this machine is designed to interface with computer equipment. Indeed, the copier is already communicating with such systems in Japan, a facility which is likely to become available in Britain next year.

Without a doubt, the "intelligent copier" is already here.



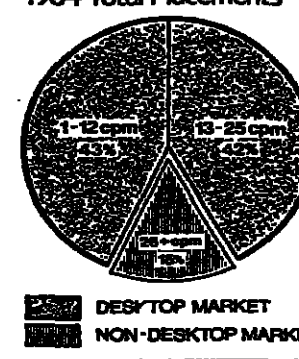
Mr G. P. Barua, director of the National Business Equipment Survey in the UK. He has been conducting surveys of the copier market for 14 years and predicts that suppliers will shortly be turning their attention to broadening their product lines.

"Whereas American manufacturers concentrated almost exclusively on the high volume end of the market, we've already seen them attacking the low volume market place."

"Now we are about to see Japanese manufacturers going for high volume copiers, which will bring them into more direct competition with the Americans. However, in order to succeed, Japanese suppliers will have to think hard about their distribution policies, which have been heavily dealer-orientated."

## Desktop Copiers

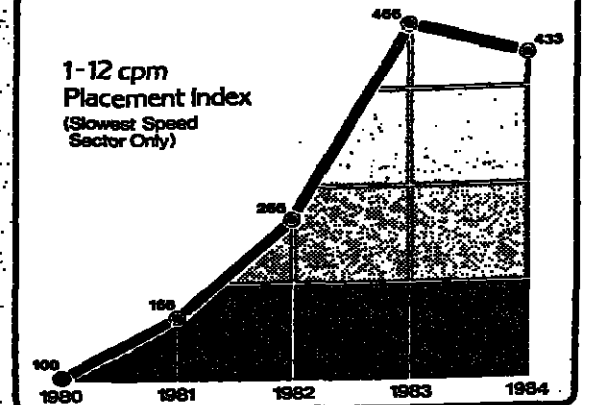
## 1984 Total Placements



Throughout last year, Canon, Minolta and Sharp were locked in battle for the desktop copier market, in the UK according to the latest figures from National Business Equipment Survey's "Continuous Copier Survey."

The desktop market is now the major market segment. Basically, consisting of machines which operate at between 1-25 copies per minute, it accounted for a massive 85 per cent of placements made in 1984.

Figures in the fast cpm sectors have remained remarkably static between 1983 and



1984. It therefore appears that the 1-25 cpm band has increased its placement percentage at the expense of the 1-12 and 26-30 cpm bands, lopping 6 per cent off each. Thus, 1-12 cpm placements are down 6 per cent from the 1983 figure of 49 per cent to 43 per cent and 26-30 cpm placements are likewise down from 12 per cent to 6 per cent in the course of the year.

Mr G. P. Barua, director of NBES, says, "This is actually a very significant fall for the 26-30 cpm sector—in the space of one year it's seen half of its market placement percentage wiped out."

## The personal computer phenomenon

ALTHOUGH THERE is a slowing-down in the personal computer market in the U.S., the total number of PCs installed in UK offices topped 250,000 last year while sales will again double this year, pushing the installed base to more than 500,000.

These are some of the findings of the latest Oasis report which suggests that the U.S. market is slowing down because most of the people who can reasonably justify purchasing today's technology are probably doing so. We may see the same effect here in the UK in 1986-87.

The next generation of machines will be much more powerful, and the operating system much more helpful—this will release a second wave of buying.

Other findings in the survey show that:

Personal computer sales in Britain last year exceeded 140,000 units, representing a total outlay of £600m.

Sales will again double in 1985 and push the installed base over 500,000.

These are not personal computers, however—nearly 80

per cent of the machines are shared. All the personal computers in the survey were used by executives, at least part of the time through secretarial usage.

Word processing is the most popular application, closely followed by spreadsheet/accounting.

By 1990 the total annual spending on hardware and software will reach £3bn, and the total number of machines installed will be approaching 3m.

These 3m systems will be split between clerical and secretarial machines, similar to today's devices but at half the price, and a new breed of sophisticated systems for executive use. This will represent an annual outlay of £2bn at the end of the decade, a total market, therefore, of more than £3bn.

Managing this growth, and providing the support and training to assist the users to fulfil their needs and exploit the performance of these devices will be a major task for the vendors over the next 10 years.

An empirical law suggests that there are about seven major vendors in each stable element of the office equipment market and that each new technology introduces one new player: Xerox in copying; Digital in mini computers; and Wang in word processing are the most obvious recent examples, says the report. It is not clear who, if anyone, will emerge from the PC environment to become one of the majors of the industry.

The other elements of the survey, which is claimed to be the most complete analysis of the PC environment in Britain, are a review of the major vendors, to establish their potential for staying in this market.

Wharton also concludes that the wired office is unlikely to be generally in place by 1990, but departmental systems, either using a controller or a small network, will be widespread.

Personal Computers in UK Offices: Wharton Information Systems, Richmond upon Thames; £650.

MICHAEL WILTSHIRE

Western Europe's software and services market tops \$12bn

## Software packages boom

## Computer usage

BORIS SEDACCA

THIS HAS not been a good year for the "electricals" sector, not only for companies at the hobby end of the computer market, such as Acorn and Sinclair, but also for solid companies with wide spreads of activity, including GEC, Thorn, EMI, STC, Racal and Plessey in the UK, and even IBM and AT&T in the U.S.

The problems were thought at first to be structural—established companies showing signs of becoming moribund until they began winding down old product lines and investing in new markets and technologies. But then, one of the software stars which were thought to be immune to prevailing market conditions, Micro Focus, also came down with a bump.

If the problems facing the industry are merely cyclical, no one could have predicted the severity of the slump. But as sure as day follows night, there will be a recovery after the shakeout.

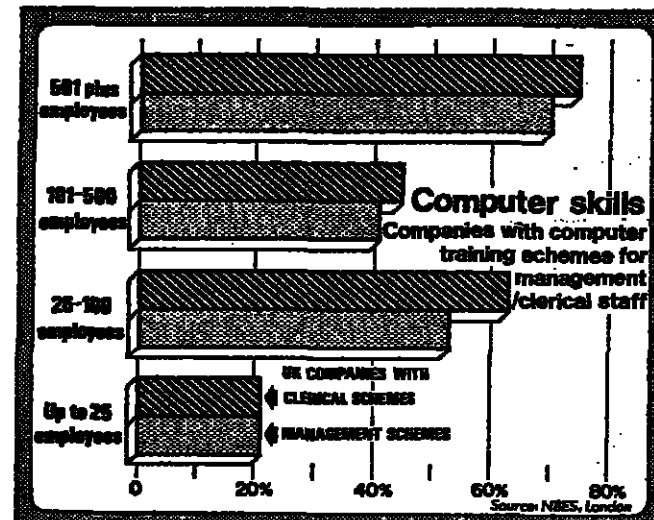
## Forecast

According to a recent survey, published by market research analysts International Data Corporation (IDC), the personal computer market for businesses in Western Europe is forecast to grow fivefold by 1990 when personal systems worth more than £80m will be sold each year. However, the boom is expected to be matched by a corresponding fall in the home and hobby computer market. The high street computer sector is expected to continue to be extremely competitive, even for more sophisticated products designed to appeal to the small business user.

But according to another recent survey, carried out this time by Manpower, the temporary staff company, 80 per cent of personal computer users in large companies believe they are not getting the maximum benefit from their machines.

The views of nearly 600 people, mostly in companies with more than 500 employees, were sampled in the review. Users blamed lack of adequate training and inadequate time for setting up and practising with the computer. Some complained about "non-existent training" and incomplete manuals.

There has been very little outward change in the fundamental design of computer products offered by the office equipment industry.



The basic Qwerty keyboard is a case in point. The Maltrom keyboard's ergonomic layout is arguably superior to that of the conventional Qwerty keyboard, even if only for the fact that the Qwerty layout was designed to retard, rather than enhance, typing speeds on early mechanical typewriters in order to avoid having their keys jamming.

With the advent of "mouse-ware," the use of graphics icons—used in the place of text—and "windows."

The rate at which new suppliers of microcomputer products are entering the UK market has fallen sharply, especially in software, according to the National Computing Centre.

Changes

There were 1,083 software suppliers in June 1985, only 17 per cent up on the total of 925 a year ago. Some 240 suppliers came into the market in the first five months of 1984 while in the same period this year there were only 153.

At the same time, the number of failures has increased from 40 in 1984 to 67 this year.

The survey, which covers more than 0.0m products, packages and courses available on the UK market, shows that just under 2,800 or 27.5 per cent have been launched or revised with new features in the past three months. When products withdrawn from the market are included, there had been 1,000 product changes a month.

The prime reason for the high rate of change appears to be that suppliers are more concerned to improve the competitiveness of existing products by price and feature improvements, than spread their efforts over a wide range of products," comments the NCC.

An analysis of the UK's top software distributors by the consultancy Roncote supports the NCC survey, showing that three out of the top 15 distributors in 1984 had withdrawn from the market by May 1985.

The fifth-ranked company, Tamaya, was in receivership. MPI, tenth ranked, was being wound up through a petition initiated by Microsoft, and

WHS Softeam, ninth ranked, withdrew from software distribution in March 1985.

The leaders, Softel, with a turnover of £4.7m, and First Software with £6m, were well ahead of the rest of the field.

Growth in the sector, however, seems to be around 60 per cent a year, although profitability is down. This rate of growth is expected to continue for the next year or so before flattening off.

Romtec adds that while there is a need for software distributors, there is only space for a few. "There is nothing special that extra distributors can offer, but it is an attractive cottage industry because much of the business can be done by phone, to establish a number of companies have sprung up, therefore, each of which exerts a small influence on margins."

Romtec concentrates its studies on the micro end of the market, but if one takes a broader view, the turnover of UK computing services companies broke the £1bn barrier in 1984, according to the latest annual survey of the European computing services industry.

The UK computing services industry, of which the software industry is one part, began to take off in its sixties with the advent of the bureau—organisations selling computer time to companies which cannot afford their own computers or cannot keep them fully utilised.

Many began to offer additional services based on standard software, including payroll and accounting, while others specialised in providing services to specific "vertical" markets and industries, such as banking, construction and insurance.

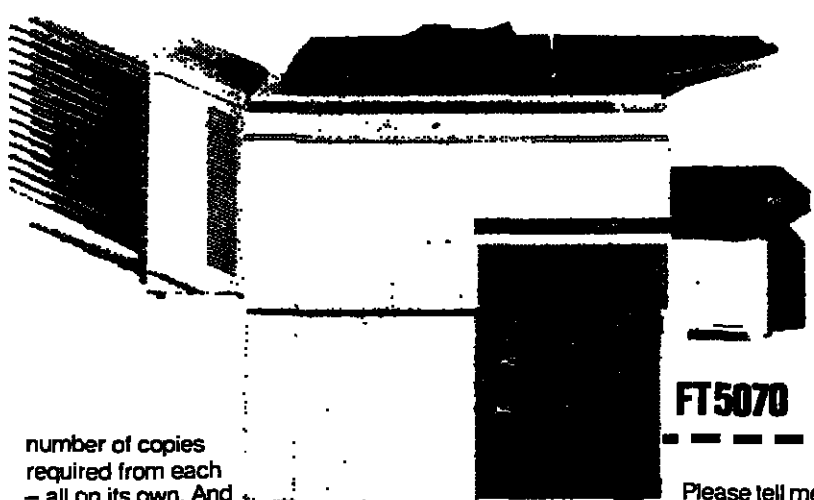
Dr Douglas Eyskens, director-general of both the UK and the European computing services associations, noted that 1984 was an outstanding year for software products (packages) with growth rates of about 38 per cent.

The total market for software and services was \$12bn in western Europe. Turnkey systems, included for the first year in the survey, showed the most dramatic growth. Turnkey systems are complete custom-built computer systems supplied to the customer as ready-to-run with hardware and software.

The even more optimistic view of the UK market, Mr John Butcher, Under-Secretary for April that Britain's computer software industry alone is estimated to have increased its turnover from £1,750m in 1983 to £2,120m last year, more than double the CSA's figures. So

CONTINUED ON PAGE 3

# RICOH COPIERS REIGN IN JAPAN AND NOW TELFORD



FT5070

OVER FORTY PER CENT of the copiers sold in Japan are Ricoh copiers. The reasons are entirely scrutable. They're good copiers. And they're backed by a Japan-wide network of good dealers, who give good service.

Japanese businessmen know a good deal when they see one. As the world's biggest producer of copiers, Ricoh has a lot of feedback from users. So a new copier like the Ricoh FT5070 has features that Ricoh knows people want.

## BOTH SIDES: ZOOM SIZING

Like making a single, double-sided copy from a 2-page spread in a book or magazine, automatically. Like reducing and enlarging not just at set ratios, but at any ratio from 50% (A3 to A5 etc.) to 141% (A4 to A3 etc.). Or like the optional automatic feed system that sets up originals and organises the

number of copies required from each — all on its own. And the sorter, which can take the chore out of making up multi-page sets.

## RICOH'S U.K. COMMITMENT

Ricoh's latest purpose-built copier factory is now in production at Telford, Shropshire.

No other Japanese copier manufacturer has shown that kind of commitment to Britain. Plus, Ricoh has an independent nationwide network of good dealers, whose quality of service was ranked No. 1 by an independent survey.

When you see a Ricoh copier, and a Ricoh copier, you'll know why there are so many Ricoh users in Japan. And why Ricoh is set to storm the UK too. It's time you saw a Ricoh.

Please tell me: (tick as appropriate)  
☐ more about Ricoh  
☐ about the Ricoh FT5070  
☐ about other Ricoh copiers

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Handwritten signature: J. P. Sedacca



## Office Equipment 3

Increased power and functions have eroded the division between word processing and computer-run text processing equipment

## Different systems begin to merge

### Word processing

KEVIN TOWNSEND

WORD PROCESSING, according to a new report from the U.S. market researchers Frost & Sullivan, is in a state of flux.

"The fairly specific division between word processing and other types of text processing equipment that existed until 1980 has been breaking down progressively since that date," says the report.

One area in which this is most apparent is in the traditional distinction between the dedicated word processor, and the word processing software package running on a personal computer.

Word processing originated from two separate sources: the dedicated machine evolved from the automatic typewriter; while the software package evolved from the text editors devised to help computer programmers.

The different derivation explains the basic difference between the two types of word processor. The dedicated system

was designed for typists, and has to be easy to use. The text editor was designed for computer users, and power was the primary prerequisite. Since its earliest days, each type of word processor has sought to emulate the better features of the other, so that PC word processors are becoming increasingly easy to use (for example, MacWrite and GEMwrite), while dedicated systems are becoming increasingly more powerful and flexible (for example, Wordplex and DEC's WPSS).

#### Well defined

The result is that it is becoming increasingly unrealistic to speak in terms of a "dedicated word processor" on the one hand, and word processing software on the other hand. Nevertheless, these distinctions are still made, and can be used provided the terms are given their historical context.

Within these definitions, one of the best-known and strongest "movements" has been the erosion of the dedicated market by the ascendancy of the PC market—so much, in fact, that for several years industry commentators have been suggesting

that the days of the dedicated word processor are numbered. The facts belie this suggestion. What has happened is that the dedicated word processor has focused in on the smaller but well-defined market of dedicated typists, while the larger market of part-time word processing users have been able to settle for a part-time word processor.

In the meantime, of course, the dedicated manufacturers have expanded their interests to include "office automation," rather than simply "word processing." Wordplex, almost synonymous with "dedicated word processing," is a case in point. The company decided many years ago that it was only the stand-alone market that was beginning to level out, while the market for multi-word processing within an integrated office would continue to expand.

Wordplex now has more experience than any other company in the market. "We were selling and installing shared resource systems in 1976—long before DEC, Hewlett-Packard or anybody else had even woken up to the potential of the office systems market," claims Mr. Richard Kemp, managing director.

As a result, Wordplex is one of the few companies that can point to consistent and unbroken growth despite the current depressed state of the computer market.

Another traditional giant in the dedicated WP market is Digital Equipment Company (DEC). DEC claims to be the second largest computer manufacturer in the world, and has a word processing system (called WPSS) that is perhaps the most frequently imitated word processor of all.

This system started life as a straightforward dedicated word processor known as the WS78. Over the years it has evolved, through the DECmates I and II into the current DECmate III word processing workstation. Although it is essentially the same software as that running on the WS78, DEC now markets the product as a workstation that should be seen as the specialist typing arm of its integrated office product called Alpha-1.

Under current definitions, it is impossible to say whether WPSS should be viewed as a dedicated word processor or a word processing software package—hence, perhaps, Digital's new description of it as a word

processing workstation.

While these examples typify the way in which dedicated word processors are evolving, they throw no light on the way in which PC packages are moving. It was the U.S. company, MicroPro International, that laid down the standard with a package called WordStar. This has been so successful, and is still so prolific, that several different surveys claim that between one in four and one in five of all PC users actually use WordStar.

However, ever since the arrival of WordStar, other packages have tried to be just as powerful—but as easy to use as the dedicated systems. Unfortunately, in computing terms, "power" and "ease" are incompatible. To make something powerful, the user is allowed to get as close as possible to the "raw machinery" of the system—but to make something easy-to-use, the user is kept as far away as possible.

As a result, PC word processing suffers from a type of split personality. There are a few systems that simply try to be powerful—and are excellent at that. There are a few systems that try to be easy-to-use—and indeed are exceptionally easy.

But there is a great mass of word processing software that tries to be both and fails to be either.

An example of an easy-to-use system is GEMwrite from Digital Research. GEMwrite draws on all the recent research into graphics, icons and the mouse to provide a word processing system that is relatively powerful but very easy (and enjoyable) to use. It is the sort of word processor that is perfect for the non-expert executive, for the system itself guides the user through each function, including the complex routines.

In contrast to this we could cite the new package, produced in the UK, called LaserWorld. This has been designed to make use of the new laser printers now coming on to the market (see elsewhere in this survey). But LaserWorld is really an extension of an existing package called Sonnie Blue, which was specifically designed for users who wanted to be able to use the full power (in this sense, "power" means "speed") of the current PCs.

In this way LaserWorld is not a suitable word processor for the average corporate typing pool—but for the user who wishes to produce laser printouts, macros, perform multiple

### Sales growth in Europe

(Figures for 1984, for which the total market in these four sectors is \$4,853m)

Electronic typewriters	\$939m	(4% growth)
Word processors	\$578m	(13% growth)
Personal computers		
(dedicated to office use)	\$1,687m	(82% growth)
Office automation systems	\$65m	(300% growth)

Source: Wharton Report.

### European text processing market

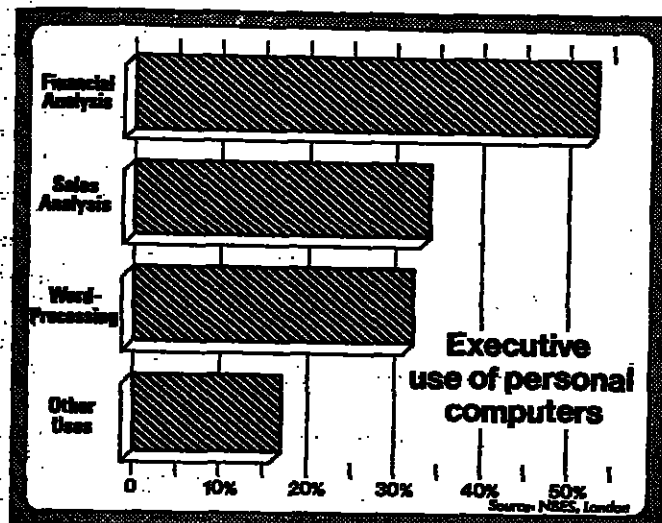
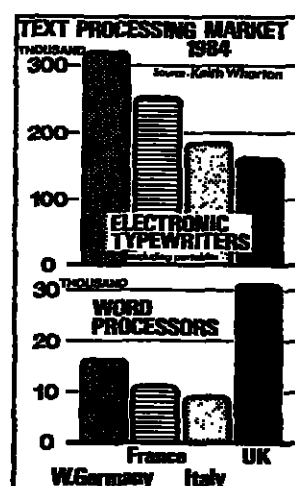
Year	Annual Revenue (\$000s)	Growth %
1981	563,526	+140
1982	1,112,325	+120
1983	2,333,890	+110
1984	3,202,320	+37
1985*	3,654,560	+14

Annual sales in text processing market (in 000s units)

Year	Units	Growth %
1983	1379.8	—
1984	1824.9	+32
1985	2217.9	+22

\*Estimate

Source: Wharton Market Report.



A recent survey reveals that senior executives in the UK, with access to personal computers and terminals, are most likely to use them for financial analysis purposes. More than half the sample—53 per cent—uses PCs in this way. Around 44 per cent of executive PC-users said they fed data into the computer; a slightly higher proportion, 49 per cent, said they also retrieved data. (The total in this NBS analysis exceeds 100 per cent due to multiple mentions by PC-users).

## Computer systems

CONTINUED FROM PAGE 2

much for statistics! But there is always a problem in putting together accurate global figures for any specific market because it always depends on what is—and what is not—included in the particular categories.

The fact that turnkey systems show more growth potential than software products indicates that customers always require some degree of software customisation for their particular way of doing things, even though they may be using generic software packages such as ledgers and payrolls for their general requirements.

The production of a line of code today costs about the same as it did some 25 years ago. At that time however, applications were less sophisticated and the code generated was less complex.

Today, a problem requires the generation of many more lines of code because more encompassing functions and reports are required, as well as the need for integrated systems, demands for real-time information, round-the-clock operations, larger data files, remote communications, and data security.

Inbucon, a London-based management consultancy, found that only 171 out of about 800 companies surveyed for a special study were using software development products called fourth generation languages (4GLs).

Yet the report largely confirms the claims of 4GL suppliers that they can lead to considerable productivity gains. Increases in programmer productivity and decreases in development time of between four and 10 times are claimed, together with dramatic reductions in the work needed to maintain the software.

The first generation of computer languages was very primitive, with sets of 0s and 1s representing electronic impulses put together in simple codes, read directly by the computer.

Second generation languages substituted mnemonics for binary digits—LDA instead of 00101 for "load accumulator," for example—but it was not until high-level or third-generation languages, such as Cobol, evolved that it was possible to give commands to a computer in anything like everyday language.

But then, the computers themselves became more powerful. Fourth generation

languages were introduced as a partial answer to the problem of generating increasingly sophisticated and comprehensive computer systems.

The most pressing problem for data processing managers, study after study has shown, is meeting project deadlines and reducing the backlog of development and maintenance work.

A traditional solution has been to install a package a piece of software written for a specific application but in such a form that it can be sold, unmodified, to a number of customers each of whom reaps the benefits of the economies of scale obtained.

But as Inbucon points out: "Packaged application software, one solution to the problem, only covers fairly standard sets of requirements. Most medium or large organisations still need to undertake bespoke (or custom) software development and this has now become the target for the newer efficiency and productivity aids."

So 4GLs evolved as application generation tools, pieces of software which made it easier for programmers to develop other programs.

#### Accuracy

It also makes possible "prototyping," creating a prototype of an application quickly and without too much concern for absolute accuracy to see whether it really is what the customer wants. Customers are notoriously bad at making clear what they really want when they specify computer systems—creating a system to suit takes time, money and patience.

There is, however, an overhead, to be paid when using a 4GL. The load on the computer inevitably increases because of all the processing power being used up making life easier for the programmer.

Fourth generation languages are considered to be part of the software side of computer systems. Some suppliers prefer to talk of a fourth generation "environment" rather than a language.

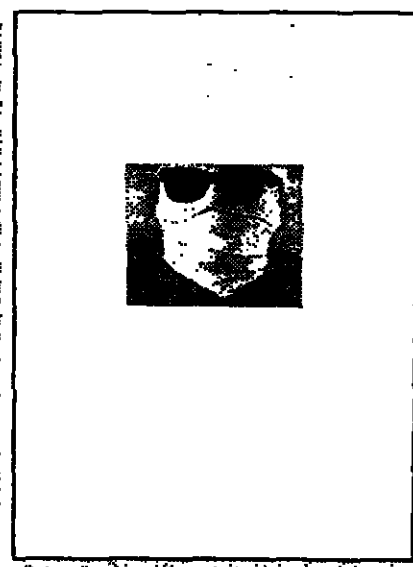
The next stage will be the "fifth generation computer" where the software and hardware will be so closely coupled that the two will be indistinguishable and inseparable. Work has already begun on it, but the concepts are very futuristic and all-encompassing, so it will take a very bold person or organisation to propound the sixth generation computer. By then, perhaps even the word "computer" may fall into disuse.

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## Office Equipment 4

## Confident market despite dip in demand

Electronic typewriters  
KATE TAPHOUSE

ALTHOUGH THE demand for electronic typewriters in Britain has been accelerating at a much faster pace than any other business equipment product sector, apart from the fast-moving micro market, concludes a new survey by the National Business Equipment Survey, "summer '85 has shown a distinct falling-off in demand."

This news will undoubtedly surprise and dismay many of the world's leading typewriter manufacturers. Other surveys have recently estimated that there is something like 8m mechanical typewriters that are approaching the end of their

useful life. These mechanical typewriters will undoubtedly be replaced by either fully functional word processors or electronic typewriters. And while almost everybody believes that a dedicated word processor is ultimately more efficient and flexible than a typewriter, nevertheless the price differential is likely to mitigate towards the typewriter for the smaller company.

This factor becomes even more advantageous when the typewriter selected can be built into a full word processor, as and when required, simply by adding the extra functionality through modular screen disks, memory and so on.

It is quite likely that the current downturn in demand is either a seasonal or other temporary fluctuation rather than any sign that the boom is over. The unexpected dip in demand for electronic typewriters from

May onwards probably reflects far more product evaluation among UK buyers (rather than just buying off-the-shelf), suggests Mr Mike Brownbridge, head of Brother's typewriter division in the UK. Today there are 150 models to choose from nearly 30 brand names, whereas five years ago there were only two brands and four models on the market.

It is certainly true that some of the world's leading manufacturers are still very confident—a confidence that will have been strengthened by the double-edged sword of IBM. IBM, noted for an almost legendary marketing ability, has recently launched three new electronic typewriters.

This move, on the one hand confirms the potential of the market, but must also disconcert the existing producers. IBM has a traditional liking for and success in achieving, 50 per cent

of any market it seeks.

Surprisingly, however, IBM does not figure among the current word leaders—having been knocked into second place, even in the U.S., by Rank Xerox. Both companies, incidentally, have used the European giant, Triumph Adler (which claims to make one in six of the world's electronic typewriters) to produce some of their systems.

Mr Peter Oddy, product development manager at Hermes Precisa, believes that "the battle for electronic typewriter sales is between the Japanese and Europeans—with the Americans nowhere in sight."

## Competition

He cites a recent report that describes Olivetti as the UK's leading supplier, closely followed by the German companies Adler and Olympia—and only then Canon and Brother from

Japan.

Hermes Precisa, incidentally, is now part of the expanding Olivetti empire, and Mr Oddy feels that the growing threat is from Japan rather than the rest of Europe or the U.S. Indeed, he finds that neither IBM nor Xerox provide any challenge to Hermes Precisa outside of central London, and suspects that the former's current typewriter sales "ride on the back of its computer installations."

Threat from Canon, in particular, is well perceived. Mr Eddie Scougall of Eriksen Information Systems pointed out that "Canon is said to have taken more than 10 per cent of the UK market between 1982 and 1984"—which had "been achieved by pricing policies rather than innovative technology."

For "pricing policies" in this instance soundly "dumping"—and, indeed, the EEC came to a similar conclusion by imposing duties of up to 33 per cent

on certain Japanese makes. (Brothers Industries' recently opened assembly plant in Wales that will allow it to avoid these duties.)

There is, of course, a strong likelihood that the price of the Japanese computers will rise in relation to their competitors. Since there is very little "typewriter" demand in Japan itself (other than the highly specialised and very different Japanese language typewriters), the Japanese manufacturers are producing solely for the western market. It would be consistent with known strategies for these "pricing policies" to be used solely to gain entry into the market before the prices are allowed to float upwards to a more realistic level.

"They are using price," says Mr Scougall, bluntly, "to gain a foothold." In the meantime, Eriksen Information Systems is a well-known producer of electronic typewriters and other technology-based products, but

is best-known in the UK under the brand name of Facit. While acknowledging that Olivetti remains the UK market leader, Mr Scougall points out that since the first Facit product in 1962, the Olivetti market share has dropped from 40 per cent to 30 per cent—while Facit's share has risen from nothing to 8 per cent.

However, with computers becoming cheaper, and electronic typewriters becoming more powerful, there is an increasingly blurred distinction between the two. Facit's top-end machine has 40 Kbytes of text storage capacity, and can store formatting routines.

Most of today's systems have communications facilities, and many can be used as telex and/or teletext terminals. The new IBM range has an optional 50,000-word spelling dictionary that checks each word as it is typed, and warns the operator if it detects a word that it does

## European electronic typewriter market

Olivetti	26%
Olympia	19%
Triumph Adler	15%
Brother	10%
Facit	7%
Others	23%

Source: Wharton estimates.

not recognise.

And while word processors are ideal for producing large numbers of repetitive standard letters, many companies still need to produce one-off individualised letters, memos and so on—for which an electronic typewriter is often faster and easier. But the two technologies are not mutually exclusive, for many electronic typewriters are also used as printers for the output from word processing systems.

"I see the two techniques as co-existent," agreed Mr Scougall, "each with its own role to play, rather than as competitors."

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New generation  
telephones

KEVIN TOWNSEND

BRITAIN'S offices, according to some overseas observers are more American than European—and nowhere is this better seen than in contemporary telecommunications. While the mainland European governments show little enthusiasm for re-regulating their national telephone authorities, the UK has followed the American lead and first liberalised and then privatised British Telecom.

In the U.S. it was the massive Bell company that needed to be controlled: in the UK it was the state-instigated monopoly of a nationalised industry. The parallels, however, are so strong that much was learned from the U.S. experience.

Freed from the need to purchase from Bell, the U.S. market received a sudden and enormous demand for cheap and innovative telephone handsets—and needless to say, the demand was filled by cheap imports from the Far East.

Bell itself could not decide whether it wished to become involved in the frenzied telephone retail industry. It watched, put its toe in the water, drew back and watched again. The problem was that the public wanted the quality to which it was accustomed at the price of the new imports—and the two were incompatible.

## Timely

The UK, fortunately, seems to have learned in time. Perhaps it is an inherent European reserve that holds us back; nevertheless, the BAST approval system has applied a sufficient brake to prevent the "see for all that occurred in the U.S." The result, however, is claimed by many to be too extreme: that BT actually uses the approval system to maintain (or at least cling on to) the vestiges of its old monopoly.

Be that as it may, British Telecom's monopoly on the "primary instrument" ended in January 1985, and according to the research of UK company



BRITISH MONOMARKS has launched a service which enables users of both micro and telex to communicate. The service, called Monodata, is a simple and economical electronic mail service ideally suited to the small business market. Monodata provides a desktop telex service without the heavy costs of specialised telex equipment, says Mr Stanley Solomons (above), joint managing director.

Dialatron, has created a market worth £150m for simple telephones this year alone. This market comprises over 30m handsets attached to 15m residential and 5m business lines.

Dialatron is one of the companies that has accepted the challenge of liberalisation. It manufactures, for example, the Rumour 10 handset that now outsells BT's own Simbel system. Another company challenging BT's erstwhile markets is Vanderhof PLC—manufacturer of the small PABX known as the STAT 10. It is this area of telephone equipment that is being revolutionised by the new private exchanges. The biggest single trend in all computer equipment is away from the mechanical and analogue towards the electronic and digital.

BT never considered that its monopoly extended to the large PABX systems; and, indeed, it is the computer revolution that is revolutionising the new private exchanges. The biggest single trend in all computer equipment is away from the mechanical and analogue towards the electronic and digital.

Indeed, so strong is this movement that it is becoming increasingly difficult to choose between local area computer networks (LANs) and traditional in-house telephone or PABX networks.

One excellent example is Plessey ILS, which is primarily a PABX that can carry data as happily as voice, and can accept computer terminals as easily as telephone handsets. Since every existing company automatically has an internal telephone network, many of the new LANs are specifically designed to operate over the existing telephone lines.

But computers are also being used to monitor other telephone equipment. Known as "call-loggers," such systems are designed to monitor the use and expense of all the individual lines and extensions in a given telephone system—and, of course, with increasing telephone use and increasing telephone costs, it is a booming industry.

The amalgamation of telephone and computer is

nowhere better seen than in the OVD from ICL. Known as the Tomto, when purchased from British Telecom, this machine is a remarkable testament to British ingenuity and co-operation. The basic design and computer architecture, together with the archive storage and the BASIC programming language, come from Sir Clive's Sinclair Research. The application software (Xchange) was developed by Psion.

The telephone system was produced by British Telecom. And the whole system was integrated and put together by ICL itself. The result is a desktop system that is both a highly computerised telephone, and/or a very powerful desktop computer.

Each OVD has two telephone lines so that one can be used for speaking, while the other can be simultaneously engaged in a data dialogue with a mainframe computer. The computer side of the system can even be used to make automatic telephone connections with any of hundreds of telephone numbers stored in its user's private directory—without the user needing to lift the handset.

Perhaps the biggest competitor for the OVD in the UK is the well-established and much-praised Executel.

But it may not be too much of a problem that the Executel is manufactured by STC—which of course now owns ICL. There are some critics of the OVD that claim that it does nothing that Executel cannot do more cheaply; and it is certainly true that Executel development continues, with new versions due imminently.

In the meantime, it is becoming all-too-easy to be confused by the vast numbers of new equipment spurred by the twin drives of digital technology and BT liberalisation: new handsets, autodiallers, modems, PABXs, key systems, facsimile machines, telex, teletext, cellular radio, call loggers, videotex, electronic mail and so on. Needless to say, where there is an exhibit, there is an exhibition—What Telephone & Communications Show? at the Novotel, London, in November. Details of other specialist exhibitions are listed on the last page of this survey.

## New printing age dawns

Computer  
printers

KATE TAPHOUSE

THERE are essentially only two types of computer printer: fully formed character printers; and dot matrix printers. But within these two categories there are dozens of different technologies.

The fully formed character market is now dominated by the daisywheel printer, although much faster "line" printers are still used at large computer installations. Dot matrix printers range from the traditional inexpensive impact dot matrix to the new high-technology laser ink-jet and thermal transfer printers.

Today, the typical microcomputer installation is typified by a daisywheel printer for letter quality correspondence printing and an impact dot matrix for draft and graphics printing. However, both the daisywheel and the impact dot matrix printers are under threat from newer ink-jet and, more particularly, laser printers. The understanding the characteristics of the different types of printer can explain what is happening. A fully-formed character printer works by pressing an image against an ink-laden ribbon and onto the paper.

The primary method has three primary properties: the variety of different images is limited to the number that can be physically transported by the printer's printing medium; the quality of the image is generally very good; and there is inevitably a high degree of noise associated with the impact necessary to

transfer the ink to the paper.

It is also, of course, an essentially mechanical method in an electronic age.

The impact dot-matrix printer works in a similar fashion, but builds individual character images from a pattern of dots. The typical printer in this category will have a vertical row of, say, nine wires or pins in its print head.

As the head travels horizontally across the paper, different combinations of these pins are fired against the paper. The method of transferring the image on to the paper is similar to the daisywheel printer (that is, by "impact"); but the energy required to fire individual pins is much less, and the resulting noise level is much lower.

The mechanical element is much higher. The quality of the image, being nothing more than a pattern of dots, is greatly inferior to the quality of the daisywheel. However, its one big advantage is that the number of dot patterns/characters is limited only by the variety of images possible within the pin matrix of the variety of images possible within the pin matrix of the printer concerned. Since the patterns are usually controlled by software, dot-matrix printers can theoretically produce a wide range of different types—styles—even within a single document.

## Lasers

It takes little imagination to see that the ideal printer would have the versatility of a dot matrix and produce the quality of a daisywheel—and, indeed, it is the attempt to find this ideal that has led to the latest development in printer technology; the laser printer.

Laser printers have been in existence for several years, but they are only now becoming cheap enough for the mass market. The technology is actually very simple to grasp, for it is an amalgamation of laser and photocopying technology.

Picture a revolving drum: as it revolves, its surface is energised by a laser, which builds up the image on the drum. As it continues to revolve, this surface picks up "ink" which, further on, it transfers to paper for the finished product.

The laser itself provides the quality of the image being able to pack up to 30,000 dots in a single square inch. The photocopying element of the technology provides the speed (currently between 8 and 12 pages per minute for a typical desktop laser printer); and the whole process is inherently quiet.

But there are two major problems with the current range of laser printers. Regardless of the name on the cover, the majority are Japanese in origin—and, like most Japanese products, they are sold in the UK via distributors and dealers. However, the technology is so new that not all dealers can be expected to fully understand the intricacies of the new systems. For the time being, laser printers are best purchased from specialist printer suppliers such as Zylg Dynamics.

The second problem is that there are, as yet, very few software packages able to make use of the potential provided by laser printers. Many of these printers can, for example, store the software necessary to print up to a dozen different type faces—but the majority of word processors were designed for

the single type-face capability of the daisywheel printer.

This, then, is the current state of the market. It is effectively the dawn of a new age in printing, when high quality results can be achieved at the touch of a button. The market leader, perhaps not in marketing or sales, but certainly in research and development, is Rank Xerox.

Xerox made enormous profits in the early days of copying and ploughed vast sums back into research and development. It was, for example, Xerox research (the Star project) that pioneered the visual-interface Mac and GEM software now revitalising the microcomputer market. Star applies this visual interface to laser printing output, but until now it has been too expensive for anything other than major companies.

Rumours from the U.S. suggest, however, that by January 1986 a fully functional Star system will be available for around \$10,000. If and when this happens, it could revolutionise the high street fast-printing industry.

In the meantime, the impact dot-matrix printers are likely to cling to a large share of the market for some years to come. Indeed, one U.S. survey (International Data Corp) predicts that the U.S. market will increase from \$3bn in 1985 to \$5.5bn in 1989. And confidence in the strength of this market is still sufficient to attract more and more newcomers—Citizen for example (of Japanese watch fame). Now produces a new range of four impact dot-matrix printers designed for the microcomputer market. But such printers will not make room for the laser printers in the mass markets without a fight!

021/00150



Electronic systems open the way for greater efficiency and cost-control

## A revolution in the mailroom

### Mailing systems

JON MOGGIDGE

TRADITION has long dictated that the mailroom has often been the domain of the office junior and consequently it is often the last operation to feel the impact of electronics and the microprocessor.

But times are changing. Today's new mailing equipment offers far more efficiency and tighter cost-control than its mechanical predecessors.

The increase in the cost of postage—hardly a month seems to go by without the Post Office putting forward one reason or another why there should be an increase—and the many different postal rates and services have made accuracy in postage calculation more vital than ever.

The latest electronic scales have taken the guesswork out of deciding the correct postal rate to send a letter or parcel, and they display accurately the weight and rates for all the Post Office's services on an LED (light-emitting diode) display.

These machines have eliminated the problem experienced with mechanical scales of a

borderline decision where the user can either play safe and frank at the higher rates, possibly wasting money, or opt for the lower rate, risking a hold-up in the mail if he makes a wrong estimate.

Sophisticated in their operation, yet simple to use, these scales usually require a single keystroke for each function. Moreover, when the postal rates are changed they can easily be altered by a replacement chip which is programmed with the new rates. This is sent by the manufacturer to the user, but at a cost, of course.

Electronics have also transformed the franking machine market. The old-type fiddly mechanical dials and levers have, in most cases, been replaced by push-button keypads and LED displays show the postal amounts selected.

Eliminating the mailing process further, electronic scales may be interfaced with electronic franking machines. Such systems automatically calculate the correct postal rate on the franking machine via the scales. They are a boon to the high-volume users whose mail often varies in weight and value.

Pitney Bowes and Hasler offer this facility in the UK. Furthermore, Envopak intends

to launch a German machine, the Francotyp 3000 (which has similar capabilities) at the International Business Show at Birmingham's National Exhibition Centre in October.

For companies with high-volume computer-generated output, such as bank statements, invoices, letters and so on, it is now possible to interface a folder/insertion machine with the electronic franking machine enabling stationery to be folded, inserted, franked and sealed in one operation.

### New model

Hasler will demonstrate its latest model in this field, the KMS, for the first time in Britain at IBS. More than £2m has been invested in its development and it boasts some interesting features. These include a double/misfeed detector with ultrasound sensing which checks that the envelope's contents are correct; and a new folding carriage which allows almost any type of document to be processed—for example, thick documents, such as credit cards, and forms which are wider than the envelope.

The demand for departmental accounting has also spawned electronic franking machines which offer daily print-outs of departmental totals. So far,

Hasler is the only company to offer a machine with a built-in printer. Other manufacturers, such as Pitney Bowes, offer this function but require another unit to be interfaced with their franking machine.

A recent innovation in the crediting of franking machines is a remote meter resetting service (RMRS) which enables the customer to telephone Pitney Bowes' central computer; this then issues a coded number. The user keys this number into the machine thus recoding it to the value of the cheque sent to Pitney Bowes. That is a great improvement on the old system which entails logging a weighty meter to the Post Office for recoding.

Another method of recoding is the Value Card bought from the Post Office for a certain value and simply slotted into the meter. This method has only a small share of the market and users may encounter problems with it since some Post Office staff are not yet familiar with the system.

With the rapid spread of the personal computer, more companies are producing address labels on office computer printers. These addresses can be printed on self-adhesive labels, listing paper or straight

onto the envelope by direct impression printers.

For more sophisticated data management there are specialised micro-based addressing systems such as ASI's Sprinter data retrieval and printing system which is no bigger than the average typewriter. It comprises a typewriter keyboard, a fast printer, two-line display and 5¼ inch disc drives and built-in software.

### Capacity

The Sprinter stores up to 1,024 entries per disc which can be manipulated for sorting, coding, editing and so on. Selective printing is also available. Encoded information on file can be selected by using six "and" and six "or" criteria—a capability that could be put to good use by, say, an estate agent faced with the problem of matching applicants' requirements with suitable properties available, and involving details such as price, type of property, number of bedrooms, garden and so on.

Security is often a problem when producing and distributing computer-produced confidential information. Speediseal, a new system from Moore Paragon, is claimed to be the answer. In a single operation

the system produces a complete, self-contained original printout in a rapid continuous operation.

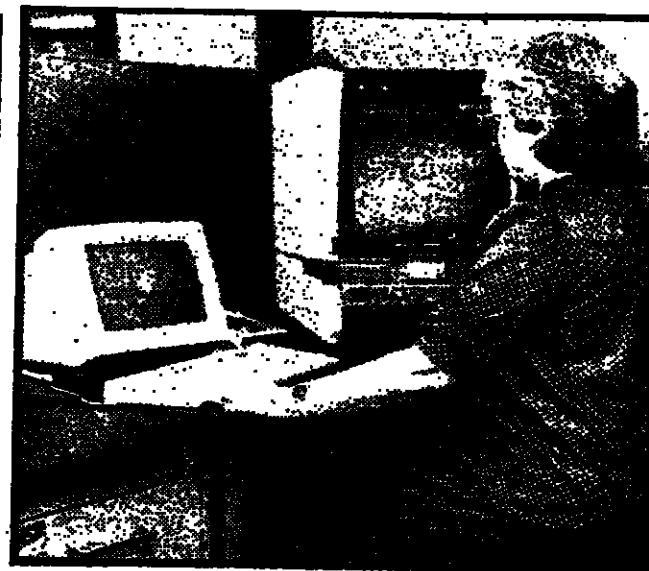
Using their existing computer equipment, the operator can print variable data on each Speediseal form before passing it through the equipment which folds, trims and detaches the form then heat seals it creating a self-contained envelope ready for posting.

Each copy is an original and therefore difficult to alter.

By designing a two-part version of the form, the problem of heat seal adhesive being incompatible with heat fusion impact printers has been overcome.

Finally, the all-important, all-embracing question of the post-code. In the UK plenty is being done by way of publicity to encourage businesses to use the post-code, and it certainly makes sense. Under "The Postcode Project," the Post Office offers advice and, in certain cases, a financial contribution that may even extend to the full cost of postcoding a company's computer address list.

In addition, companies may be able to take advantage of significant reductions in postal charges by using the post-code in their customers' addresses.



THE UK microfilm market increased last year to more than £114m, compared to £97m the year before, according to Bell & Howell.

Computers have led managers to expect faster access to information and this in turn has made them more dissatisfied with conventional paper filing systems.

Rapid retrieval means rapid decision—one reason why computer-assisted retrieval (CAR) systems are one of the fastest growing sectors in the microfilm market. Bell & Howell's sales of CAR systems doubled in value in 1985 to

take them to 18 per cent of their systems sales.

Picture above is the Bell & Howell DataSearch CAR system, recently installed at Lucas Service, the car electrical component company, enables staff to retrieve in excess of 300 documents a day. The system was chosen for its simplicity of operation and speed of access.

A variety of accounts correspondence is filmed in-house at random and the descriptions for each document are entered at the same time as the image is captured, allowing Lucas to create an index simultaneously.

## No easy solutions

### Electronic filing

KEVIN TOWNSEND

THE PROBLEMS of filing are well known. Any single document can be filed under any one of dozens of different references and is likely to be filed under the wrong one. A mis-filed document is virtually the same as a lost document.

For many years researchers have dreamed of a solution from new technology. The computer's ability to search enormous quantities of data quickly and efficiently would seem to be an obvious answer. But experience has shown that this is not the simple solution. The problem is that the computer's traditional strength is in searching fixed formats—like an index—rather than the text itself.

It is easy to get a relatively small computer to store and search the card index to the filing cabinet, but it is still virtually impossible to get the same computer to store and search the whole of the cabinet's contents.

There are two primary problems:

● Firstly, and despite the falling costs and increasing capacity of computer hardware, it is still impractical to think in terms of storing the entire documentary data—for even a small company—on a computer.

● The second problem is that the effort taken to enter all of this data into the computer would be prohibitive. Paradoxically, a small company could not afford a large enough computer; while a large company would have too much data to make the effort worth while.

In some respects, these problems are likely to be only temporary, and current research suggests that they will be solved within a few years. Text input, for example, could be achieved automatically by optical character readers (OCRs).

At the moment, OCRs are incapable of accurately reading the smudged, dirty and damaged documents that might contain several different typefaces. However, as the hardware improves and becomes aided by the new software-based interpretation aids such as Southdata's typereader, this may cease to be a problem.

### Laser disks

Furthermore, the physical problems of storing the vast amounts of data required of such filing systems may soon be solved by the arrival of the new laser disks due to start appearing within the next few months.

"Users would be silly to invest in systems to automate existing storage and retrieval systems, when laser disks that will store large volumes of data, and many other good possibilities, are just around the corner," comments Southdata's managing director, Mr Peter Laurie.

This is not a view shared by everyone. The "technologically possible" tends to take many years before it becomes the "practically possible." And even then, the cost may be prohibitive for all but the largest companies. It follows, then, that any company with an existing filing problem should seek a solution from existing possibilities.

Depending on the resources available, these tend to fall into one of two broad categories. A computer can either be used to store abstracts of the document together with an indexing system to allow users to locate

their required abstracts; or it can simply store a more sophisticated indexing system that will cross-reference to the physical position of the documents concerned.

This last solution is probably the best, current solution for the small company, for almost any microcomputer with almost any microcomputer database system could be used.

However, it is no solution for the large company that may have millions of documents in store. Knowing where a document or documents are held is not the same as retrieving those documents. And this has led to the concept of computer-aided retrieval of microfilm.

The theory is simple: documents are microfilmed, and stored, and a cross-referencing index is entered into a computer. This basic concept has been elaborated by specialist manufacturers, such as market leaders Bell and Howell, with an integrated system that can not only locate and retrieve microfilm documents in seconds, but can also produce hard paper copies in about ten seconds.

### Stage further

One such installation is at Lucas Service UK, where the concept has been taken one stage further. Many of Lucas' documents are actually produced by their own computer. Using computer-output-to-microfilm (COM) techniques, the microfilm and the computer index are produced automatically and simultaneously.

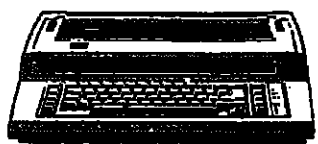
Many companies, however, prefer the "abstract" approach. This involves entering an abstract from the document in to a computer, and preparing a sophisticated indexing system. This is particularly useful for scientific and research companies. LERS is a Paris-based pharmaceutical company with a need to maintain and retrieve information on a wide range of products—each of which could have up to 25 different names. LERS chose a product called BASIC from the Battelle Institute itself a scientific research establishment.

The next stage was to collect and record abstracts of all the material published around the world on their products.

There are, of course, other such bibliographic databases on the market. STATUS, part of ICL's Networked Office concept, is one example originally developed by scientists at Harwell. And MicroCairs from RTZ Computer Services is one of the few systems available on microcomputers. Whatever system is chosen, however, there remains the problem of entering the abstract and index into the system—and for many companies this effort will not be justified by the ensuing results.

But all is not lost. We are, after all, in the age of telecoms wizardry, and there are numerous specialist on-line database companies that will go to the trouble and expense of entering and maintaining not just the abstract, but also the entire document. Within 48 hours of publication the article you are now reading will be stored on Datasolve's new 200m w.c. 1 World Reporter database. User/readers will be able to type, at a terminal, any word or phrase of current interest—and the system will search out every article on the FT database containing these words. It will display, within seconds, the number of relevant articles, their headlines, and their length—and the user can then read, ignore or print for later study, as much as he needs.

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## Office Equipment 6

## Systems market breaks new records

Office furniture  
MICHAEL WILTSHIRE

WHILE THE \$6.5bn a year U.S. office furniture industry continues to soar to record levels, the European market shows a new level of buoyancy after several difficult years.

In the UK, the market is now worth around £800m of which the fastest-growing sector is for computer-related systems furniture worth around £90m a year and increasing by as much as 20 per cent annually, similar to the percentage growth rate in the U.S.

There are at least 50 serious contenders in the UK systems market, where the impetus by the spread of new technology, word processing systems and personal computers.

The UK systems market is "very buoyant and far ahead of Europe in general," comments Mr Mike Brewster, sales director of Westinghouse Furniture

Systems, which is extending its range from the more familiar computer-related systems to specialised, non-traditional schemes for finance houses and banks.

Britain's overall office furniture market, including wood and metal furniture, will grow between 12 and 15 per cent this year, according to Project Office Furniture, the UK's leading producer of wooden desks. Project itself is on target for a £30m turnover (£24.6m in 1984) which will be 20 per cent up on last year. The company's sale of Matrix panel-based systems furniture is up by nearly 50 per cent. Chair sales are up by 18 per cent.

The company now claims 28.6 per cent of the UK's wooden office furniture market, 18.5 per cent of the overall market, assuming a market growth of 15 per cent. Project's research programme was increased by 50 per cent in the past two years, with £3m being spent on new manufacturing plant. Its products are licensed or sold in 12 countries—and it estimates that more than 1m people in the UK alone now work at a Project

desk, made within the past ten years.

As the UK systems market becomes more mature, Mr Jeffrey Brown, marketing director for Arenson International—one of the UK's leading furniture suppliers—sees a distinct trend towards more "simple and flexible" systems furniture that can be easily understood by user-companies, but combining all the required facilities of cable management to cope with new technology.

Of the group, reports a furniture sales increase of 20 per cent and predicts further growth in both traditional and simplified systems furniture. He reckons that the company's President range has captured 20 per cent of the UK desktop market.

While recognising that there is plenty of fierce competition between importers and UK suppliers, he is relieved to see a lessening of "run of the mill furniture" at "dump" prices from Eastern Europe.

Among top-of-the-range U.S.-designed systems, Herman Miller remains the clear leader in the UK, although other

importers are making determined efforts to catch up. The U.S./French company Steelcase Strafor, although a relative newcomer to the UK market, is the largest office furniture group in the world. Its turnover in Europe is around £200m, although the UK figure is only £10m at the moment.

Mr Jack Spalding, managing director of Steelcase in the UK, is seconded from the U.S. company. He has turned the UK operation from a direct sales force approach to distribution through a national dealership network which should be complete by the end of this year. Steelcase in Europe spent £3m in research in 1984 and now offers an extensive computerised design service from its European base in Strasbourg.

Among the larger of Steelcase's recent installations in the City of London are the extensive offices of Spicer and Pegler at Friary Court where 450 people have been equipped with workstations.

Vickers Furniture, the largest UK producer of steel office furniture, this year launched its System E-80, following £250,000

research and development project at its Dartford factory. The new system aims to combine the best of American and European styling—it is a modular system, compatible with the well-established System E free-standing desk range.

Lucas Furniture Systems forecasts a sales turnover of £12m in the UK by 1987; the company reports good sales for its award-winning Programme 2 range and plans to announce further developments to the range which it predicts will have "a major effect on our presence in the systems market."

Lucas Interiors, an associate company, has developed with ICL what it describes as "a revolutionary type of conference room—to be used as a management and reviewing facility in a compact environment." The system, known as the Pod, will be marketed jointly by both companies in UK and Europe.

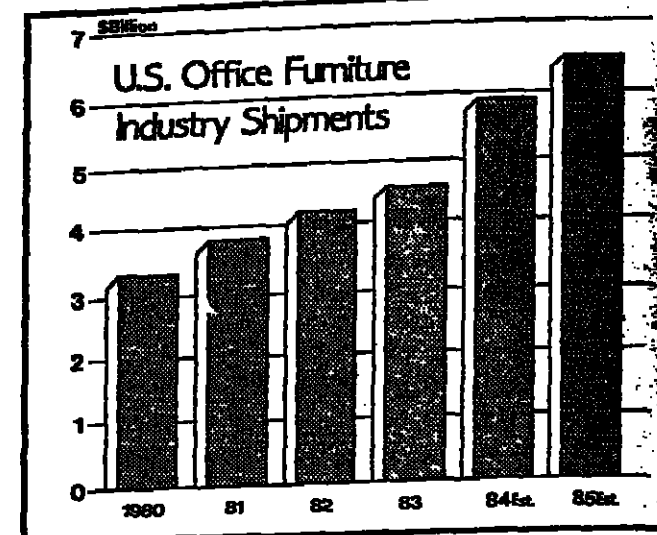
Local office equipment dealers are winning a far larger slice of the systems business, according to Mr Brian Matthews, chief executive of Caplan office furniture, part of the Pentos group. "More companies are looking

for local, personal service when they plan to invest in what is to them, a major physical overhaul of their business," says Mr Matthews. "Increasingly, they are looking to their local office equipment or computer dealer to supply this."

Pentos reports a 100 per cent increase turnover for Caplan to nearly £10m, which claims to be number two in the wooden office furniture market in the UK. A large part of this growth is accredited to the Novus systems range sold through a dealer network.

Meanwhile, manufacturers large and small are rushing to introduce new systems into an already crowded market place. Recent launches include Project's new look Prisma range while Arenson producers of the Genesis range under the President banner, is introducing its Paris 800 system in the mid-price range.

The Office Kit consortium in the UK, led by Michael Carson, has also achieved "considerable success" with its all-British system. Office Kit recently completed contracts for the Guinness group, the British Shoe Corporation and Tiphook. The



company's easy-to-assemble designer-style system in fresh colours has a strong appeal to image-making clients in the advertising, media and design fields.

Innovations at the International Business Show next month will include the launch of Martella's "Seven-day Office" project which aims to deliver and install a fully-operational office within seven days of receiving an order.



Mr Jack Spalding of Steelcase Strafor: "In the seven years we have been in the UK market our share has risen from nothing to 7 per cent today and is rising at over 50 per cent a year."

THE RAPID growth of the systems furniture market in the U.S. is also reflected in the smaller, but lively European markets, particularly the UK, where these computer-related products now account for some 30 per cent of total office furniture sales—and the proportion is set to double over the next couple of years, predicts Mr Jack Spalding, managing director of Steelcase Strafor (UK), part of the world's largest office manufacturing group.

## Westinghouse contract

WESTINGHOUSE Furniture Systems are undertaking a major refurbishment programme for Manpower, the fast-growing offices services organisation which has a network of more than 100 branches in town and city centres throughout the UK.

The Westinghouse screen-based system is being installed. So far, 28 Manpower branches have been refurbished or are scheduled for refitting to reflect a newly-developed corporate image.

## Wider role ahead for the micro

Sending text  
BORIS SEDACCA

IT IS inconceivable for any business to survive today without voice communications in the form of the telephone. Yet by far the greater majority of text communications still takes place by post in the form of handwritten, typed or printed words on paper or "bankruptcy."

The use of telex has been limited mainly to large and medium sized companies but over the last few years, a number of new text and message communication services have been coming onto the market which will be affordable by smaller businesses, too.

"Telex is the best-established international network for the transmission of urgent messages," says a forthcoming issue of Buckley's Guide to Office Automation about to be published in October. "In the UK there are in the region of 120,000 users and worldwide the figure is reputed to be around 1.5m."

Although slightly different systems may be operated by different countries, the network is effectively interlinked. The effect of technology has been limited, although Telex operators can now set up messages on a screen before sending them—a facility called "store and forward" previously provided by paper tape feed mechanisms on older machines.

"In large companies with heavy telex workloads a message switch system can be helpful. They can also record the details of each message—duration, charge rate, destination, for example—and produce weekly or monthly reports so that management can keep the use of (expensive) telex lines to the economic optimum," adds the guide.

The limitations of the telex network have been obvious for years. The speed of transmission is slow, designed to be fast enough to keep up with the fastest typist but nothing like as fast as (the speed at which) computers can send text between each other. Further-



The advantage of videotext is its ease of operation. Here, Mr Wilfred Martens, the Belgian Prime Minister, taps into an Intertex-Belvid terminal linked to an international database.

more, telex's range of characters is limited to upper-case only and doesn't include useful characters like "2" signs and fractions.

"To put this right the public telecommunications agencies of Europe joined forces to develop a new super-fast telex system with a full range of characters called Teletex. The system is electronic rather than electrical, and so allows text to be transmitted between 20 and 30 times faster than telex," the guide adds.

Teletex provides "store and forward" facilities and the system links into the conventional telex network, but the major problem is cost. It is currently priced at a level which would discourage any but the biggest or most specialised company—the necessary "black box" that goes with the system is priced upwards of £2,000.

"More and more businesses are using electronic mail services as a low-cost substitute for telex. For some messages, especially lengthy ones transmitted over long distances, electronic mail works out to be as little as a third of the cost of telex," says the guide.

Electronic mail services consist of large central computers accessed by ordinary telephones lines with data storage divided into "mailboxes."

## Valuable aid to productivity

Dictation equipment  
KAY FLETCHER

DESPITE all the advances in office automation, it is estimated that up to 60 per cent of business communications in Europe are still made in writing. A large proportion of executives have yet to discover the advantages of using dictation equipment with all its advantages in productivity and cost-saving.

The average 150-word business letter can be dictated in around 21 minutes, 17 per cent of the time it would take to write it. Some leading manufacturers of dictation systems have estimated that with standard forms of shorthand and transcribing, each letter despatched from the office costs at least £8 and could be a lot higher (see table).

A significant part of this cost is taken up by the actual process of dictation—interruptions such as phone calls, unexpected visitors and the inconvenience of having to read back shorthand to refresh the dictator's memory—all factors that waste time. In a head-to-head contest over productivity and cost-saving machine dictation is the clear winner.

But it cannot be ignored that

even though working with dictation machines is faster and more efficient, two-thirds of the machines installed are not properly used. Most managers would still rather use more familiar methods, especially as dictation equipment does require certain skills—authors must be able to organise their thoughts and present them in a manner that will translate well into the written word. Also many organisations strive for total conversion to dictation systems and do not recognise that different kinds of work are more easily adapted to dictation than others. Reactive dictation—a response to a letter or completing the items of a form—is easier to learn than creative dictation.

## Improvements

Despite this apparent unwillingness by many managers to adopt dictation machines as part of their daily routine, equipment has improved dramatically in recent years. The magnetic tape cassette which is available in different sizes and formats has become the predominant recording medium and has led to an increase in sound quality. Cassettes with electronic position marking are now commonplace and the incorporation of a microprocessor has improved ease of use and can provide valuable dictation management information.

Three types of equipment are

currently available: hand-held or pocket machines; desktop machines and central recording systems. The most notable change in pocket machines is the continuing reduction in size and a more streamlined design for greater ease of operation. Features such as automatic stop and start, and indicators for letter ending were usually sacrificed for slimness and lightness but most new models are now able to let the transcriber know where a document ends and where any special instructions are located on a tape with a special electronic signal.

For managers who prefer to do most of their dictating in the office and who dictate at least three pages a day, a desktop machine probably offers the best solution. Most models now include study facilities as voice operation of tape movement and automatic cut-out after a few seconds' silence, as well as backspacing after each stop so that the author or transcriber does not lose the train of thought if a recording is interrupted.

Centralised dictation systems are a modern development from the traditional typing pool. For large offices, with numerous authors, centralised systems are an economical alternative to using separate desk-top units for each manager.

This is also a useful method of input to combined typing and word processing operations. Authors are connected to the

typing pool via the normal telephone network—a principle which has changed little from earlier centralised dictation systems. But higher quality reproduction can now be expected from most new models and dictation can be made from anywhere in the world by phone, just as if it were a dictation machine.

Users also have the choice of auto-change tape cassette recorders or endless loop recorders. The latter are often more economical and efficient than cassettes, although once a recording is made it cannot be removed from the machine and filed. It is also often difficult to identify and locate high-priority dictation among all the other documents on a loop.

## Convenience

In addition to providing authors with the convenience of being able to record from their desks when the necessity arises, centralised systems have taken on an increasing supervisory role to monitor the progress of a pool.

Systems can now calculate how much work is waiting to be typed; how long the first item in the queue has been waiting; the output of the various transcription stations and departmen-

tal usage. In fact, management information available through these systems is often claimed to be far better and more comprehensive than that provided by text-editing systems.

Voice-store and forward is a fairly recent technology which may soon become an alternative to traditional dictation systems. This can streamline the distribution of short inter-office communications to a large number of recipients by eliminating transcription of the dictated message to typing, proof-reading, copying and physical distribution.

Instead, the author records a message once and this is stored on computer media for later access by as many recipients as are designated. Equipment in the waiting message, which they listen to by phone.

## The cost of sending a letter

Comparisons in the UK for an average 150-word letter, assuming executive costs are between £10-12 an hour and typist costs at £5 an hour.

Writing out longhand	Shorthand dictation	Machine dictation
Executive writing time—15 minutes	Executive dictation ..... £1.00	Executive dictation ..... .70p
Typing time ..... £1.25	Typist shorthand note time (inc "travel") ..... .70p	Typist typing ..... .60p
Executive checking time £1.25	Stationery ..... £1.25	Executive checking ..... £1.15p
Stationery ..... .25p	Executive checking ..... £1.15p	Stationery ..... .15p
Typewriter ..... .10p	Stationery ..... .25p	Typewriter and dictation equipment ..... .18p
Office overheads, average £5	Typewriter, etc ..... .15p	Office overheads ..... £3.00
Postage ..... .17p	Overheads ..... .54	Postage ..... .17p
Total ..... £10.77p	Total ..... £8.52p	Total ..... £5.80p

The output figures are based on studies made by the Dictaphone company among a cross-section of users, both before and after the installation of audio-dictation equipment.

Typing from longhand or from shorthand notes is taken at 10 words per minute on average and from audio dictation at 20 words per minute. Dictation to a shorthand typist assumes an overall shorthand rate of 25 words per minute. This includes dictation at the typist's speed, pauses by the author for thought or to look up a reference and so on.

The figure also includes a small increment for the typist's time in going to the executive's office or desk. Typewriter and dictation equipment costs assume that the hardware is in reasonably constant use throughout all working days.

With shorthand typing, of course, the typewriter necessarily stands idle while shorthand notes are being taken, hence the higher figure in this column. Office overheads are calculated using estimates but the proportions between the three columns reflect the different levels of staff time involvement.

Source: Dictaphone Company.

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## Office Equipment 7

## Demand grows for better workplaces



An example of the Office Kit's furniture system installed for the Guinness group. Office Kit has completed installations worth more than £500,000 for clients in the UK in the last three months.

## PROFILE: RAILEX

## Optimism in filing sector

THE INFLUX of paper records as a result of computer print-out and the increasing use of office copiers is good news for filing cabinet makers who provide new ways to store it all.

With more than 70 suppliers in the UK market alone, the mood in the filing industry is one of cautious optimism, says Mr Bryan Wilson, chairman of Railex Filing Systems, whose clients include ICI, Unilever, British Aerospace, the clearing banks, the Ministry of Defence and most of Britain's local authorities.

Despite predictions several years ago that the anticipated "paperless office" would decimate the filing industry, the opposite has happened, says Mr Wilson, as the increasing use of computers has led to a rising demand for specialised filing systems.

Railex is busier than ever, with its three factories (two in Southport, Lancashire, and one in Manningtree, Essex) all working at full capacity. The North country family business was begun in Rochdale in 1908 by Frank Wilson and is run today by six of his descendants.

Railex purchased the Elite steel filing cabinet company in Essex in 1979. It continues to produce the successful brand of Elite drawing office equipment as well as manufacturing the Railex steel cabinets which hold the familiar Railex hook-on



Mr Bryan Wilson of Railex: busier than ever

lateral filing system which was developed in the 1950s but is still widely used today.

More recent Railex developments include the Rotascan range of filing carousels, and circular storage systems, plus equipment for floppy disk, fiche files and security storage.

An important market for Railex is the printing industry with the provision of customised filing systems for artwork, film and printing plates. The company, which formerly traded under its original name of Frank Wilson Filing, is today committed by articles of association to remain a private company. It has recently set up a new London sales centre and is winning increasing export orders from Europe and the Middle East. Meanwhile, substantial investments in plant and machinery have been made at the Manningtree factory in the past year.

Mr Bryan Wilson, who served two terms as president of the British Equipment Trade Association, affirms: "There's plenty of business available in UK manufacturers in our industry for those who are prepared to put in the effort to go after it."

M.W.

## PROFILE: GRUNDIG



Herr Guenter Schroeder (left) and Mr Bob Adams of Grundig

## New moves in word processing market

MORE THAN 80 per cent of the world dictation equipment market is concentrated in only three areas—North America (50 per cent); and Britain and West Germany, which together have close to 30 per cent, with Germany being the slightly larger market of the two, according to Grundig.

With 30 years' experience in the market, Grundig commands around 50 per cent of West Germany's desk-top and portable dictation machine sector. It is now making a determined bid to increase its share of the UK market, where Philips Business Systems dominates the desk-top scene.

In Germany, Philips, together with a consortium of banks, took over the majority of Grundig shares in April, 1984. Then, Mr Hermann Koning of Philips became the new Grundig president with two major tasks in restructuring Grundig. First, by cutting costs and streamlining production and, second, by diversifying the product range to include more professional electronics (video and testing equipment, for example), plus more office technology products and a strengthening of the home electronics section.

Mr Guenter Schroeder, who is responsible for the office machine division, is optimistic about Grundig's new move towards word processing using easy-to-operate "intelligent" typewriters, linked with Grundig's Steno Cassette 30 system, the world's first mini indexed cassette system of which more than 1.5m machines have been sold. Grundig guarantees to maintain its well-tried Steno Cassette system for at least a further 10-year period.

Following intensive research into word processing input and output systems, Grundig is aiming for a package that is "as easy to operate as a mechanical or electric typewriter, but which has all the intelligence of a very sophisticated word processing system."

Mr Schroeder. The typewriter price will be very competitive—some what lower than the cost of a standard office electric machine. Mr Bob Adams, Grundig's marketing manager in Britain, estimates that one-in-three desk-top machines in the UK is a Grundig. The company, which has new headquarters at Rugby, reports an increased market share in the UK in the past four years.

## Thicker tape

Grundig's Steno Cassette 30 system uses tape that is a third thicker than other cassette tapes, giving unique toughness and longer life, as well as allowing desk-top machines to be rewound 30 times as fast as normal play-back speed.

Mr Adams is optimistic about Grundig's versatile new 2080 pocket-size recorder which allows users to move away from the desk, but keep all the technical refinements of a professional dictating machine.

Most of Grundig's equipment in Britain is sold through a network of 100 dealers, with the exception of machines supplied to Government departments. Grundig will shortly be introducing the Teleboy 3003 telephone answering device into the UK market—this equipment can act as an electronic mailbox, allowing managers, for example, to dictate reports by phone after normal working hours.

M.W.

The office environment  
AUSTAIR GUILD

However, there can also be a considerable discrepancy between the claimed performance of partitions and actual performance. "Results achievable in a laboratory may simply be impracticable on site," says Mr Charles of Bickerdike Allen Partners.

Ventilation systems are now being cited as an important source of many of the problems encountered with indoor air quality. According to Ms Jennifer O'Neill of Building Use Studies, writing in this month's issue of *Facilities*: "There is growing concern about the possible relationship between the environment created in energy efficient, high tech, air conditioned buildings and the health problems of occupants."

The other main culprit is the growing number of pollutants found in modern offices such as carbon monoxide, micro organisms spread by air conditioning systems and contaminants from the people themselves.

Office equipment, particularly photocopiers, is a possible contributor to indoor air pollution.

"Manufacturers monitor their products to ensure emissions are within prescribed exposure limits. In the main, the principal emission from copiers seems to be ozone. This rapidly decays to oxygen and the amount of gas generated and rate of decay are quite accurately predicted by manufacturers of the equipment."

"The area of difficulty may be the evaluation of 'acceptable exposure limits,' particularly if, as seems likely, symptoms of

illness can be triggered by small trace of organic compounds at very low concentrations individually combining and interacting causing a defence reaction within the body or other response."

The Health and Safety Executive has established a committee to review exposure limits and agree values. This committee consists of specialists, such as toxicologists, employers, industrial organisations and the trade unions.

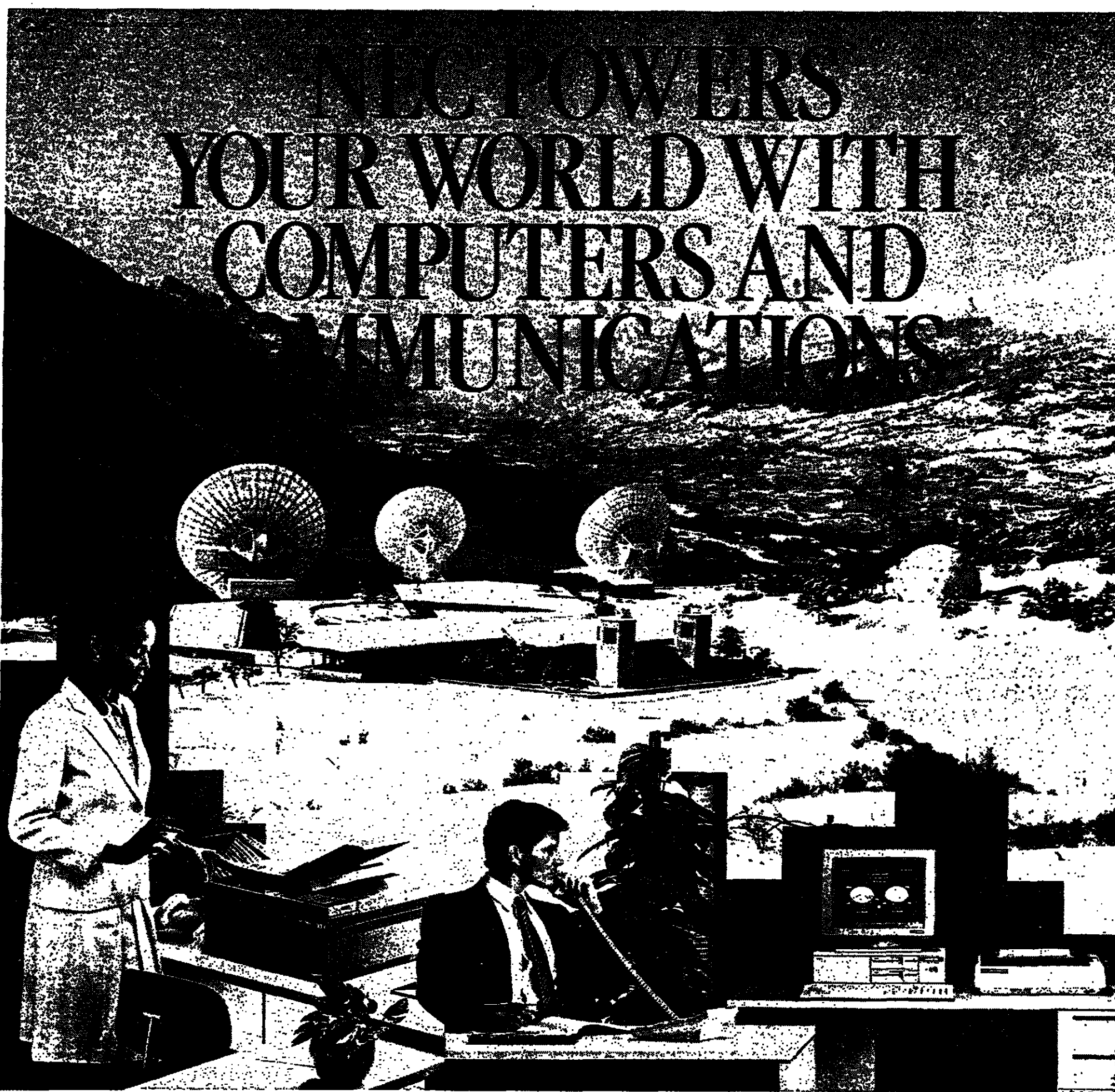


Jean Davis, industry analyst with NBS: new report reveals extent of office design problems.

## New desk range for dealer rooms

ONE of the difficult decisions facing office planners for the financial sector is the choice of desk systems best-suited to carry the advanced communications equipment. Until now, most dealer rooms have been equipped with expensive, purpose-built desk systems.

Interact have just introduced a new, flexible concept as an alternative: a standard range of multi-module dealer desks, with interchangeable components, adapted from the company's Transform II system furniture.



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**NEC**



## Office Equipment 8

Growing range of exhibitions to guide equipment buyers

## Key sources of information

WITH MORE than 60 international shows scheduled within the next 12 months for the office equipment industry—plus hundreds of smaller, regional exhibitions—manufacturers and suppliers are often at a loss as to where best to feature their products.

The potential buyer, too, is faced with the difficult decision as to which shows will best suit his requirements. But high on the list of important international exhibitions is the Hannover Fair which this year attracted a record-breaking 850,000 visitors from 120 countries.

More than 7,000 companies were featured at the eight-day event which is regarded as the major European exhibition for information technology. Not surprisingly it is also the launching point into Europe for many new office automation products from the U.S. and Japan.

The fastest-growing section of this "fair of fairs" is the special division, CeBIT, designated to office automation.

## Rapid growth

Among this year's 1,300 exhibitors there were a host of manufacturers launching new copiers and computers—and such is the demand for exhibition space that next year's CeBIT will become a show of its own (March 12-19), four weeks before the rest of the Hannover Fair.

New figures from the National Business Equipment Survey in the UK suggest that exhibitions remain an important source of information used by 22 per cent of buyers of business equipment for large companies, although an even wider source of information used by buyers is through dealer demonstrations (28 per cent), visits by representatives of manufacturers (28 per cent) and the office equipment press (42 per cent).

The next major exhibition in the UK for the industry is the International Business Show, IBS, at the National Exhibition Centre, near Birmingham (see panel on this page).

Other events featuring office equipment suppliers and services include the following:

London, 1985-86  
DEC User Show, Barbican, Oct. 15-17, 1985 (details from EMAP,

01-637 3699). International Exhibn. of Technology, Equipment and Services in Banking, Insurance and Finance, Barbican Centre (details from ITF on 021-705 6707).  
Cleaning and Maintenance Exhibition, Europa-Clean, Barbican Centre, Oct 29-31, 1985 (details on 0923 777000).

What Telephone and Communications Show, Novotel, Nov. 17-19, 1985 (details from Mario Ashenden, 01-262 3382).  
Computers in the City Exhibition, Barbican Centre, Nov. 18-22, 1985 (details Online, 01-868 4466).

Stationery Industry Exhibition, Olympia, Jan. 18-22, 1986 (details, Philbeach Events, 01-385 1200).

Videotex User Show, Barbican Centre, January 29-31, 1986 (EMAP, 01-637 3699).

DEC and DEC Compatible Exhibition, DEXPO Europe, Olympia, March 4-6, 1986 (Exposcon, 01-662 8256).

PC Trade Show, Barbican Centre, March 5-7, 1986, (details, EMAP, 01-637 3699).

Electronic Pre-Press '86 (electronic page make-up, text-handling and digital imaging technology), Olympia, March 24-27, (details on 01-773 0350).

Informational Technology and Office Automation Show (Info '86), Olympia, March 25-27 (B.E.D. Exhibitions, 01-647 1001).

Consumer Electronics Show (CES), Earls Court, April 20-23, 1986 (Andry Montgomerie, 01-486 1951).

Int. Cleaning and Maintenance Trade Fair, Olympia, April 20-May 1, 1986 (details: RAI Gebouw BV, 01-437 3175).

Int'l Contract Furnishings and Interior Design Exhibition, Olympia, May 11-15, 1986 (details, Westbourne, 01-868 4499).

Services to Commerce and Industry Int'l Exhibition, Kensington, June 17-19, 1986 (details, Network Events, 0280 815235).

London Business Equipment Show, Earls Court, October 21-24, 1986 (B.E.D./BETA Exhibitions, 01-405 6229).

Birmingham, 1985-86  
International Business Show, National Exhibition Centre, Oct. 21-25, 1986 (see panel, more details on 01-405 6233).

CAD/CAM International Show, April 8-10, 1986, National Exhibition Centre (details, EMAP, 01-637 3699).

Int'l Heating, Ventilation and Air Conditioning Show

(Hevac), National Exhibition Centre, May 11-15, 1986 (ITF, 021-705 6707).

Communications Equipment and Systems Exhibition and Conference, May 13-16, 1986, National Exhibition Centre (ITF, 021-705 6707).

Other forthcoming exhibitions in the UK (outside of London and Birmingham) include:

Business Performance and Telecommunications Exhibition, Met. Exhibition Hall, Brighton, October 20-23 1985 (details on 0689 75555).

Computer Equipment Exhibition, Met. Exhibition Hall, Brighton, May 13-15 1986 (details on 0428 724560).

Communications in Business Exhibition, Scottish Exhibition Centre, Glasgow, November 18-22 1985 (details on 031 225 5486).

Business to Business Exhibition, Belle Vue, Manchester, November 10-13 1985 (details on 01-729 0677).

West Germany  
Systems '85, Munich (Computer and Communications International Trade Fair, with 1,000 exhibitors from 19 countries), October 28-November 1 1985 (details in UK from Overseas Trade Show Agencies, 01-486 1951).

Hanover Fair, CeBIT, World Centre for Office and Data Technology, March 12-19 1986

## SEMINARS FOR EXECUTIVES

BUSINESS executives at 15 locations throughout Britain are being invited to a series of briefings on the theme of office automation. The campaign, entitled "Britain has IT: successful office automation," are being jointly run by the Department of Trade and Industry and PA Management Consultants.

The briefings run for two days in each location. The first session is for decision-makers, "has been carefully planned to ensure top executives gain maximum benefit from the investment of their time," says Mr Colin Leeson, campaign chairman and head of PA's office automation division.

"The briefing will provide guidance on how to maximise the business opportunities offered by office automation."

The second briefing "will help those attending achieve the objective of successful office automation," says Mr Gordon Ross, project manager.

The key challenge now facing companies is to close the implementation gap. This gap is between the potential of today's technology and the ability of an organisation to use it.

Locations for the briefings include: Southampton, Manchester, Edinburgh and Aberdeen (all arranged for this month); Leicester, Leeds, Newcastle, and Cambridge (during November); Gatwick, Surrey (December); London and Bristol (January 1986); Birmingham, Glasgow, Sheffield, and a return visit to London (all in February 1986). For more details, telephone 01-235 9088.

(details in UK from Deutsche Messe und Ausstellungen, 01-631 2191).

Office Equipment Exhibition, Büro '86, Munich, May 13-15, 1986 (details in UK on 01-486 1951).

Computer Equipment Exhibition, Wiesbaden, September 23-25 (details in UK on 0428 724560).

France  
This year's SIOOB (International Office Equipment Show) in Paris has just ended, but details of the next SIOOB event are available in the UK on 01-439 3964. Other forthcoming events in France include:

Data Processing, Office Equipment and Automation Show, Bordeaux, October 8-10, 1985.

Netherlands  
Computer Exhibition, Comdex, Amsterdam, October 15-17, 1985.

Information Technology and Business Communications Exhibition, Infocom, Amsterdam, November 26-29, 1985.

Italy  
Office Furniture Exhibition, Torino Office, Turin, May 28-June 1, 1986.

Ireland  
Business Equipment Show, Dublin, October 15-18, 1985.

Spain  
SIMO, General Office Equipment Show, Madrid, November 15-22, 1985.

## Sweden

Data-Office Infoprint, Stockholm, now on until October 2. Computer Application Programmes Exhibition, Stockholm, November 12-14, 1985.

## Switzerland

Office Equipment and Data Processing Exhibition, BUFA, Basle, October 1-5, 1985.

International Ergonomics Exhibition, Ergodesign, Montreux, October 21-23, 1985.

## U.S.

NOFA, Business Equipment Show, Chicago, October 2-4, 1985.

INFO, Information Management Exhibition, New York, October 14-17, 1985, details in UK on 01-681 5031.

Info-Source '86 (Computers, Communications and Business Equipment Exhibition), Dallas, January 7-9, 1986.

National Stationery Show, New York, May 18-21, 1986, (details from George Little Management Inc., New York).

BRITEC, British Information Technology Exhibition, Wakefield, U.S., July 14-16, 1986 (details in UK on 042129 3223).

Australia  
Computer and Office Automation Convention and Exhibition, Adelaide, October 15-17, 1985.

NOPEX, National Office Products Exhibition, Sydney, March 12-15, 1986.

## Middle East

Israfurniture (furniture for home and office), Tel Aviv, Israel, October 25-November 4.

Middle East Computer Show, and Office Technology Show, January 13-16, Bahrain (details in UK on 01-486 1951).

Office Electronic Communications Show/Computer Show, both in Riyadh, Saudi Arabia, March 9-13, 1986. (Details in UK on 01-486 1951).

## Far East

Computer Communications Exhibition, Singapore, December 2-5, 1985, details in UK on 01-688 4466.

S.E. Asia Business Show (Infotechasia), Singapore, April 9-12, 1986 (details in UK on 01-486 1951).

The Business Equipment Association in the UK has arranged joint venture terms with certain major overseas exhibitions (details on 01-405 6233).

MICHAEL WILTSHIRE

## NEW LOOK AT IBS

THIS YEAR'S International Business Show — the UK's fifth biennial showcase for a £5.5bn a year business equipment industry — will be a shorter event than in previous years and aimed at a more senior management audience.

The five-day show at the National Exhibition Centre, near Birmingham, will take place from October 21-25.

This year's event is jointly organised by BETA Exhibitions, the exhibition company of the British Equipment Trade Association and B.E.D. Exhibitions. Both companies also collaborated to present last year's London Business Equipment Show at Earl's Court.

Mr Alan Gash, managing director of B.E.D., says that research at two recent major business equipment shows reveals that the top three areas of interest to visitors are: 1, computers; 2, word processors; 3, systems furniture.

## Viewpoints

"I am not aware of a specialist computer show that encourages displays of furniture and yet it is evident that senior business managers know that the success or failure of a new computer system will depend upon acceptance by the staff who will have to use it, and that their views might be influenced by the improved working conditions brought about by the installation of new systems furniture at the same time," he says.

"Taking this principle to its natural conclusion, the integration of technologies and the inter-dependence of a wide range of products and services means that only a multi-product, general business equipment exhibition like IBS (which incidentally, had a larger area occupied by computer companies than many specialist computer shows), can provide a buyer with a complete overview of all the alternatives in order to plan for 'the complete office of the future'."

IBS this year, he says, will feature more than 35 product groups. Today's advanced technology office equipment demands an increasingly higher calibre of sales teams, thus a five-day show, rather than nine days, as in previous years, makes the event even more cost-effective for exhibitors, says Mr Gash.

MICHAEL WILTSHIRE

## European market forecasts

	(Figures in \$m)	
	1983	1986
Word processors	618	610
Electronic typewriters	1,058	725
Personal computers	1,981	2,635
Software/servers	991	1,330
Maintenance	930	1,064
Total	5,578	6,384

Source: Wharton Report.

## Market prospects

CONTINUED FROM PAGE ONE

office automation environment. The major influences upon buying policies, according to Wharton's analysis, are:

Compatibility with existing equipment ..... 63 per cent  
Reliability ..... 52 per cent  
Expandability ..... 46 per cent  
Ease of use/ ..... 40 per cent  
Cost factor ..... 40 per cent

Developments which are likely to occur in the short-term in Europe will include:

● An increase in networking — and if anything is going to cause technical problems in the heading rush to automate offices, it is this area.

● The organisational aspects of office automation must begin to receive greater attention. For example, electronic mail, electronic filing, electronic calendars and so on, all require a discipline from users that typically does not exist, particularly from a level of managers who are used to "doing their own thing" as far as personal organisation is concerned.

● The number of unhappy users will increase. Wharton identifies them as those who failed to analyse their requirements, site their objectives and plan their implementation, plus those who neglect training.

The decreasing costs of computer power and the increasing costs of people tempt management to buy more and more technology. But as the Wharton report warns, the major cost of office automation — is often ignored, with the result that in office automation projects, "the good get better and bad get worse."

Obvious cost components include the expense of installing and training, but less obvious elements are the cost of linking personal work stations to each other and to central resources. For most users the least obvious cost of all is the need to make sure a good organisation and good practices are in place before automation is even contemplated.

\*Wharton Market Reports, 32 Eton Street, Richmond, on Thames, Surrey, TW9 1EE.



Mr Richard Palmer, director-general of the British Equipment Trade Association, encouraged by bigger order books

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\*Wharton Market Reports, 32 Eton Street, Richmond, on Thames, Surrey, TW9 1EE.



Mr Keith Wharton, managing director of Wharton Information Systems, predicting an annual outlay of £3bn on PC systems in the UK by the end of the decade

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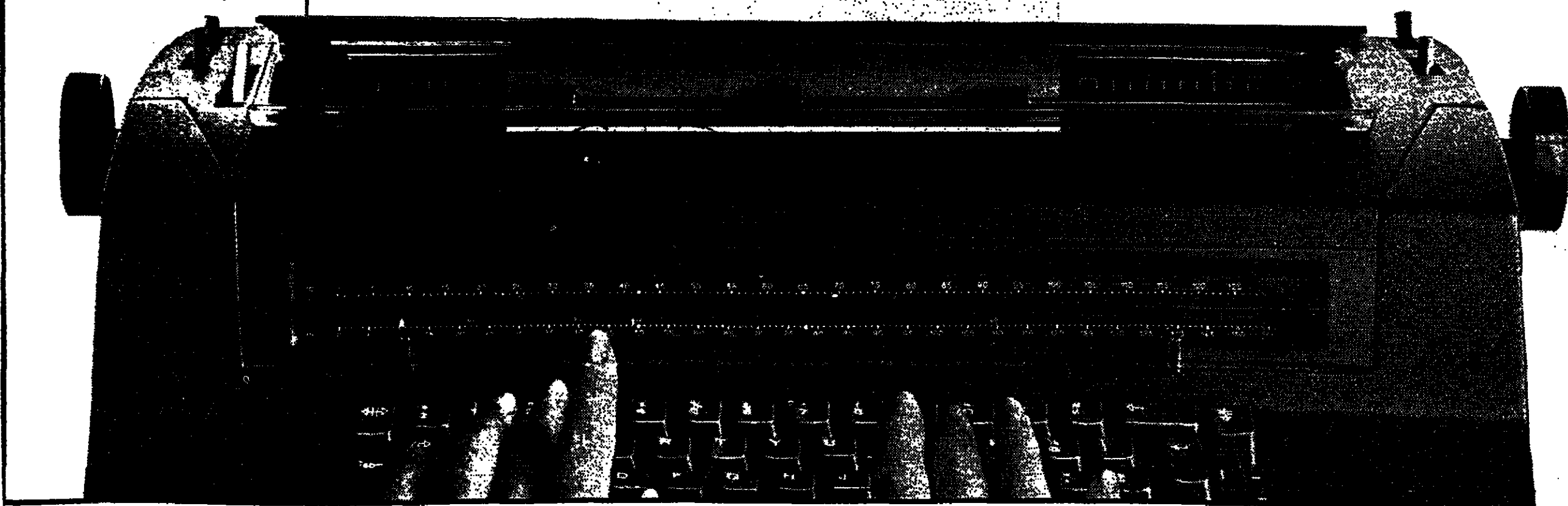
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# SECTION II - COMPANIES AND MARKETS

## FINANCIAL TIMES

Monday September 30 1985



### EURONOTES AND CREDITS

## Breakthrough for Hungary in Eastern European borrowing

HUNGARY is to become the first country in Eastern Europe to organise a new-style note issuance facility in the Euro market, writes Peter Montagu in London.

The facility forms part of a \$400m, seven-year loan package announced at the weekend by Bankers Trust, First Chicago and Dai-ichi Kangyo Bank.

It is regarded as a breakthrough in East European borrowing because previously Comecon borrowers have steadfastly resisted Euro-note facilities. They are worried that such deals might leave them vulnerable if the short-term loan market dried up, as it did for many countries after the Polish debt crisis.

Paradoxically, Hungary seems to regard its new facility as an insurance against just such an eventuality. It was nearly forced to re-schedule its debts in 1982 after a sudden withdrawal of short-term deposits in its National Bank by a number of lenders, including the Soviet Union.

Bankers say the note issuance facility, which amounts to \$150m, could protect Hungary against similar events in the future because it is backed up by standby bank credit. The terms on the deal are unusually generous for the Euro-note market, with a high facility fee of 17% basis points and a maximum yield on the Euro-notes of 32% basis points.

Also included in the package are a \$150m U.S. domestic bankers' acceptance facility with a commission of 4% per cent. It is a three-year facility but its maturity can be extended and banks that leave it will be asked to make up the difference by increasing their commitment to another portion of the package.

The final portion is a \$100m medium-term loan carrying a margin of 1/4 point for the first three years, rising to 1/2 point thereafter. Those are much finer terms than Hungary

### INTERNATIONAL BONDS

## Enthusiasm wanes for UK floaters

THE UK floater once again took centre stage in the Eurodollar bond market last week when two straight bonds repackaging chunks of the floater were launched, writes Maggie Urry in London.

But after an initial burst of enthusiasm the two deals - called BECS and MICS - were bid outside their 1 1/4 per cent fees by Friday, not helped by a market suffering from dollar-shock.

The idea looked fine. What could be nicer than UK-backed paper paying a yield around 40 basis points more than U.S. Treasury securities? It soon became apparent to investors, however, that the credit is not the UK but the arrangements of the swap from floating to fixed - Barclays Bank and Prudential Global Funding, with a Cayman Islands company thrown in as well.

Further, the issues, at \$100m each, are unlikely to prove liquid instruments. And what happens when the bonds mature after three years? That date had to be set because the UK can call the floater after three years. But it may not. Investors are guaranteed a redemption at par by banks in the deal. The floater would have to be sold to pay the bond holders.

Some investors were also concerned by the lack of gross-up provisions in the event of the imposition of withholding tax. While such

EUROMARKET TURNOVER Turnover (\$m)				
Primary Market	Secondary Market	Other	FRN	Other
U.S.	2,115.9	288.9	22.5	1,115.7
FRN	1,414.4	2,253.8	2,373.2	108.9
Other	800.5	0.0	0.0	142.2
FRN	904.4	0.0	1.5	41.2
Secondary Market				
U.S.	12,952.4	1,870.1	12,852.8	1,853.5
FRN	14,982.5	2,562.5	13,231.1	1,544.5
Other	3,092.5	25.4	300.1	1,522.9
FRN	3,092.5	25.4	300.1	1,522.9
Total				
U.S.	8,444.7	24,284.4	35,299.3	35,299.3
FRN	11,216.3	25,106.7	36,317.6	36,317.6
Other	3,728.5	2,510.1	6,238.6	6,238.6
FRN	3,728.5	2,510.1	6,238.6	6,238.6

Week to September 25 1985. Source: AIBD

for deals. "Slow" would be an exaggeration of the pace at which bonds were moving. But for last-summer's support, many of last week's issues would have been floundering. A syndicate manager who kept on the sidelines said: "I have spent the whole week saying 'no'."

The exception to the tale of woe was Toyota Motor Credit's issue launched on Friday. That is from the U.S. company and is not guaranteed by Toyota in Japan, but was given an AAA rating by Standard & Poor's. It is Toyota's first Eurobond issue and it held comfortably within the fees.

China has made its first dollar

bond issue since the 1949 revolution. But the \$150m issue is in the "shogun" market, not the Eurobond market, so avoiding any difficulties over previous dollar issues now in default.

Credit Commercial de France's wisdom in bringing a floater issue with warrants to buy an Ecu bond two weeks ago was revealed when the dollar started to slide. The warrants shot up to around double their \$36 issue price. Another such deal led by CCF but for Union Bank of Norway, launched on Friday, may not prove itself so rapidly.

Investors looking for diversification away from the dollar are spoiled for choice. The D-Mark market is offering a record DM 5.21bn in new issues in October. The amount stunned traders initially, while some bankers muttered that the old capital markets subcommittee should be brought back.

The calendar could be absorbed satisfactorily if the right names came at the right prices, if the dollar kept falling and persuading investors to buy D-Marks, and if interest rates continued to fall, dealers said last Friday.

Only one of the deals is a floater - DM 500m worth with Renfe, the Spanish railway company, the rumoured borrower. Among corporate borrowers expected are Embart, Dow Chemical, McDonald's, Nestle

and Unilever. The International Finance Corporation, part of the World Bank, and the EIB are also rumoured, as are some Austrian and Australian names, Finland and Sweden.

Bankers were intrigued by the news that a Eurodollar issue with warrants to buy D-Mark bonds is due. Perhaps CCF's Ecu idea is spreading.

The Australian Eurobond sector duly reopened, after a two-week rest, and promptly overbid the new issues again. BMW's deal, coming first, was able to accelerate away from the lights. The others were trailing behind with some stalled on the starting line.

Soon investors will have another currency to diversify into - the lira. The Italian Treasury gave its blessing to the market last week and a deal should be coming soon. Coupons roughly around the 14 per cent level might be available.

The Swiss franc foreign bond market seems not to have benefited from the dollar's fall, but it is holding its own anyway. After the R.J. Reynolds issue opened at its 9 1/2% issue price, and then rose to 9 3/4%, the 10-year deal for Portugal paying a 6 per cent coupon traded at 9 1/2% compared with its 10 1/4% issue price. Coupons are being pushed lower with 5 1/4 per cent set for Pacific Gas and indicated for Japan Highway.

## Euroaira market set to start up

By Alan Friedman in Milan

THE ITALIAN Government has authorised the opening of a Euroaira bond market, paving the way for the issue of lira-denominated foreign bonds.

The first borrower will be the European Investment Bank, which today is expected to launch a L100bn (\$34.8m) five-year fixed-interest bond carrying a 13.5 per cent coupon.

Istituto San Paolo di Torino is to lead-manage the issue, which might be followed by other Euroaira bonds for Ericsson, Ford Europe, and Bechtel of the UK.

The Bank of Italy is expected to allow one new issue a month, which suggests a possible total of between \$500m and \$800m of issues in the first year of operation.

Dr Gianni Zandano, chairman of San Paolo, described the decision to start a Euroaira market as "a very important" step which will open the way to the internationalisation of the lira.

The authorisation of a Euroaira bond market follows pressure by a number of foreign companies operating in Italy that want to obtain medium-term fixed-rate money at less than domestic lira rates. The domestic Italian corporate bond market is small and offers a negligible secondary market.

Foreign investors have been flooding into Italian equities in the past year, with U.S. and British investment on the Milan bourse now thought to total at least \$1.5bn. The Euroaira bond market will offer another lira investment instrument.

The opening of a Euroaira bond market is seen by top Italian monetary authorities as providing further evidence of the stability of the Italian economy.

The Euroaira market will be open initially only to non-resident investors. The bonds will be in bearer form, and minimum maturity will be five years.

## MAS issue poised for launch

BY WONG SULONG IN KUALA LUMPUR

MALAYSIA'S biggest ever stock-market launch gets under way today with Malaysian Airline System's offer of 105m shares at 18 ringgits each.

The issue, representing 30 per cent of MAS's capital and raising 189m ringgits (\$77m), will be a timely boost to the Malaysian stock market, which has sprung back to life in the past month after a series of measures by the Government aimed at boosting activity.

Raja Mohar, MAS chairman, said the share sale was the first step in the privatisation of MAS. The Government will eventually reduce its 90 per cent stake in the airline to 30 per cent.

The Government would continue to control the airline, appointing six directors, including chairman and managing director, and deciding fundamental policies.

After the public offer, MAS capital would increase to 350m ringgits from 70m ringgits. Of the 105m shares in issue, 32.5m would be for

public subscription, 35m reserved for Malays and 17.5m for the airline's 10,700 staff.

MAS, which began operations in 1973, made a record pre-tax profit of 134m ringgits for the year ended June 1985. It expects a setback for 1985-86.

After a drop in earnings from the domestic routes, especially the East Malaysian sector, net profits might dip to 100m ringgits for this year, the airline says. A gross dividend of 8 cents is promised.

## Gulf Canada bids for rest of Abitibi-Price

BY BERNARD SIMON IN TORONTO

GULF CANADA has offered to buy out minority shareholders in Abitibi-Price, the Toronto-based newspaper and forest products producer, in a sequel to the recent acquisition of a controlling interest in Gulf by Olympia & York.

Gulf, which already owns 84 per cent of Abitibi, said it would pay C\$95m (\$68.8m) or C\$21 each for the 4.5m shares not already controlled by Olympia & York.

Olympia, a private property group controlled by the Reichmann family, sold most of its 93 per cent interest in Abitibi to Gulf to help pay for its purchase of the oil company in August from Chevron Corporation of San Francisco.

The offer price is the same as Gulf paid for the bulk of Olympia's interest in Abitibi. Olympia indicated earlier that it planned to give Abitibi minorities an opportunity to sell their shares.

These Bonds having been sold outside the United States of America and Japan, this announcement appears as a matter of record only.

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September 1985

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16th April, 1985





**William Hall** reports on the latest mega-dollar takeover in the U.S. food industry  
**Philip Morris bids to lower tobacco profile**

brands in many repeat-purchase segments. We use many of the same distribution channels so the combination should further strengthen our relations with the trade."

The company said sales of its major divisions improved.

\* Not yet priced. † Fixed terms. \*\* Priority placement. ‡ Convertible. † Floating rate note. ¶ With equity warrants. # Dual currency.  
 § With bond warrants. (a) 1/8 over 3m Libor. (b) 1/16 over 6m Libor. (c) Registered with U.S. SEC. (d) Additional 100m ECU Tap.  
 (e) 10b.p. over 3m Libor. (f) 1/8 over 6m Libor. (g) Part paid. (h) in Tokyo domestic market. (i) 3 b.p. over 3m Libor.  
 Note: Yields are calculated on ARB basis.

\* Not yet priced. † Fixed terms. \*\* Priority placement. ‡ Convertible. † Floating rate note. ¶ With equity warrants. # Dual currency.  
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10. *Journal of the American Medical Association*, 277:1033-1034, 1997

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1. *Journal of the American Medical Association*, 2000; 283: 2689-2693.

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*Journal of Management Education* 30(6)p. 789-804

*This announcement appears as a matter of record only.* August, 1985

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1. *Journal of the American Medical Association*, 1997; 277: 1033-1036.

the 1990s, the number of people in the United States who are 65 years of age or older is projected to increase from 20 million to 30 million, and the number of people 75 years of age or older is projected to increase from 10 million to 15 million (U.S. Census Bureau, 1996).

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## FINANCIAL TIMES SURVEY

Monday September 30 1985

## Management Education and Training

Fundamental assumptions about approaches to management development need re-examining as courses proliferate under pressure from changes in patterns of work and organisation

## Time to stop and think

MANAGEMENT EDUCATION and training are at a crossroads — an exceedingly busy crossroads. New courses and less conventional study programmes continually arrive on the scene in bewildering variety.

Almost all rely to some extent on advances in information-handling technology. An increasing number are the "distance learning" type: the electronics age successors of the correspondence course. They combine video, programmed texts and "on tap" tuition to enable working managers to raise qualifications — even to the level of a master's degree in business administration — by studying largely at home.

With so much activity the people involved, whether suppliers or customers, are understandably reluctant to stop and think deeply. But it is important that they do so. Since a crossroads has been reached, pressing on is liable to send them in the wrong directions.

The thinking needs to be fundamental. For management education and training have not arrived at the crossroads entirely by their own choice. They have been carried there by forces changing the whole pattern of work and organisation.

While the change is greater in some parts of the world than others, in older industrialised countries it threatens to be little short of seismic in its effects. What can be done, and the

means of doing it, are altered by technological development, so the people do seem bound to be increasingly different. It will include various kinds of job which are primarily managerial. But what kinds?

There is a consensus among experts that many managerial jobs of the future will bear relatively little resemblance to the bulk of existing ones.

This survey was written by  
**MICHAEL DIXON,**  
Education  
Correspondent

Requirements of skill and understanding will be different, and so will be much of the education and training that future managers need. But in what ways different?

Such questions cannot be answered with certainty, not even by a business school professor of long-range planning. Merely to ask them, however, is to indicate the need to re-examine fundamental issues, including several rarely questioned assumptions underlying approaches to management development.

One of these assumptions can be brought destructively into play by the mention of "education" and "training."

In Britain, perhaps more than some other countries, and especially West Germany, many people do not take education and training to be merely different activities; they view them as superior and inferior activities respectively.

Education is widely regarded as identifying and developing intellectual powers not only to appreciate the finer points of life but also to decide what sort of things need making and doing and how they should be made and done. Training tends to be seen as a lower-order activity, able at best to equip people for the inferior work of making and doing things.

That upstairs / downstairs ranking coincides with the common assumption that, for the purposes of collective human effort, nature has arranged for people to be born into one of two sub-divisions.

The minority group consists of thinkers born with the potential to carry out the intellectual tasks of identifying, planning and organising what work is to be done: that is, the tasks of management.

The majority, less well endowed intellectually, was born to follow the thinkers' instructions in making the goods and services. (By "making" that also means "doing" activities such as selling, the object of selling is to make good deals.)

The sub-division into thinkers and makers probably underlies the belief (fortunately less

widespread than a few years ago) that middle and senior management jobs should be restricted to people who rise successfully through the tiers of academic education to emerge with a master's degree in business. The counterpart view is that management training is mainly for the predestined lower-rankers.

But to look at education and training as superior and inferior is wrong. For if "training" has any sensible definition it is surely as "the imparting of specific skills."

Reading, writing and numbering are specific skills and since nobody is born with them, they need to be imparted before education can start. Even when people have attained a particular level of education, they are

often unable to progress without training in additional skills. For instance, a school-leaver promising at geography may need training in statistics before being able to gain a degree.

Training is both fundamental to education and inseparable from it. Continuing to regard one as intrinsically better than the other can only hamper the development of capable adults.

Continuing to regard the workforce as thinkers or makers bodes ill for the economic prospects of a country like Britain. The division follows bureaucratic forms of work organisation which may have served well when countries could rely heavily for their living on the mass production of standard goods.

But unless we can replace

British characteristics with those of the Japanese (or better still the South Koreans) we cannot rely so much on the existing bulk production of goods and services. We shall need to invent, develop, make and market new ones.

The writing is already on the wall. Although government departments continue to organise around the thinkers/makers division, in the business sectors bureaucracies are being torn down.

It is not long since the majority could depend on joining an organisation and being handed a ready-made job. It looks as though fewer will be able to do so in future. A growing number will need to support themselves, not by joining organisations, but by making

things that other people will pay for.

The trend towards smaller organisations means fewer managers can expect to be employed as administrators and supervisors of other people's efforts. Tomorrow's managers will have to roll up their sleeves and take a leading, practical role in the work of development, production and selling.

To be up to the challenge in sufficient numbers, they will need education and training continually through their working lives in a range of key skills and abilities.

This survey aims to discuss those key needs and how they can be met, in an attempt to help management education and training to decide on the right way forward.

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## Management Education 2

# Freedom from bureaucracy

### Skills

LIKE numerous successful companies, IBM has decided that the bureaucratic forms of organisation which have served it so well are liable to be a hindrance in future.

Whatever advantages centralised control may have, it does not foster creativity—or at least not the profitably directed sort. And to meet challenges the company faces, especially in Europe, it needs to make more use of individual talents.

For instance, it is relatively rare for a single production line to be capable of turning out products which suit potential buyers the world over. There would be benefits in handing more power and decision-making to the managers of subsidiary operations in the field.

"We're aiming to concentrate the work of our European head office on strategic thinking instead of control," says Mr. Kaspar Cassani, head of IBM's Europe, Middle East and Africa operations.

But when managers are freed from bureaucratic rules

and have only broad strategic plans to guide them, they have to work more entrepreneurially. And, as Mr. Cassani says, they often do not know how.

"We had them coming back saying: 'We don't have the skills to discharge these new responsibilities you want to give us,'" he says.

It is not only executives away from headquarters whose jobs are liable soon to demand new abilities. The pruning of bureaucratic controls looks bound to transform the work of many people in head offices, particularly those heading staff functions such as personnel and management services.

Mr. Parry Rogers, who retires next year as personnel director of Plessey, believes that if he came back to his type of job in a few years, he would have difficulty in recognising it.

"Big-company personnel directors have traditionally been rulers of armies of in-house specialist staff. But I don't think many will be much longer," he says.

"They will be more like chief buyers. Companies will not keep a range of different personnel specialists on the payroll. They will bring them in from outside when required. Ability to manage a large staff will not be an important factor. The key will be knowing not only the personnel needs of the business internally, but which external specialist outfit will best do the job."

A corollary would be that many people formerly employed as resident support staff by big organisations would instead work in smaller consultancy-type companies, or as self-employed specialists. Specialists concentrating solely on their expertise, sheltered from the market and other pressures of business, would become rarer. So would ivory-tower administrators.

Given a continuing shift from bureaucracy, greater numbers are liable to find it more complex to earn a decent living. It will often be insufficient just to do something well enough for others to think it worth money. They will need to become more involved in marketing and financing their activities, and acquire business abilities ranging from strategic analysis to computer skills.

### Know-how

Implications for management education and training are far-reaching. While the potential market would look bound to expand, suppliers, for example, would be less able to thrive by promoting themselves and getting customers sent to them wholesale. They would have to sell direct to consumers. Just as off-the-peg products have given ground to programmes tailor-made for companies, so a growing share might go to learning packages tailored to individual wants. There would probably also be

a scrambling of the pattern of supply. For all the innovation, courses still tend to teach either the intellectual know-how of analysis and planning or the practical know-how of making things and handling people; but not both. Both are likely to be needed far more by managerial workers in future wanting to live reasonably comfortably with know-how skills as important as the know-about kind.

Selling ability, which in Britain is usually disdained by executives not directly involved in sales, could become a necessity. Many who lost top jobs in the early stages of the shift from bureaucracy have found their lack of selling skill to be their major disadvantage in trying to obtain new work.

There is a decreasing need, on the other hand, for courses such as those leading to master of business administration degrees. These endow younger people with lofty know-about abilities, but leave them largely to pick up the know-hows during their career.

That is not to say the intellectual skills of rigorous analysis will be less important. They will almost certainly be required more—and not only by people with academic aptitudes who have gained the top-class degrees demanded for entry to university management schools' MBA courses.

Ways must be developed to impart intellectual skills to intelligent but practical people. Another requirement will be



Heads together to compare notes at Henley college

more effective and widespread teaching of know-hows, which suggests expanding opportunity for action-learning programmes.

In the last analysis, however, a successful response to changes in need could probably not be achieved by management education and training alone.

Adult courses have little chance of developing intellectually and practically capable entrepreneurs out of people who in their early years have been conditioned to fill ready-made jobs in bureaucratic organisations. In Britain that is the sort of conditioning largely applied by the state's overwhelmingly academic education system, which remains geared to the industrial past.

It continues to concentrate on identifying the minority of children with an academic ear for mind and developing them into more or less proficient

"thinkers" at the neglect of other kinds of ability. The majority, with different aptitudes and inclinations, are mostly subjected to an unappealing diet of watered-down academic studies. By the time they leave school at 16, many have been conditioned to see themselves as failures incapable of ever getting a skilled job, let alone of creating one for themselves.

Whether Britain can meet the challenge of change in patterns of work organisation could therefore depend ultimately on whether government can find the will to carry through the required changes in the state education system.

If ministers need help in finding ways of developing useful skills in children whose intelligence is non-academic, they need not look far. It is already being done successfully by much of the management education and training network.

# Blight of uncommitted employers

### Spirit

HOW CAN management education and training be managed better? The question may offend the numerous organisations supplying courses and other teaching programmes covering almost all recognised aspects of managerial work. Considering the flexibility, ingenuity and technical expertise of much of the supplying network, it could claim to be managing well already.

But the question needs to be asked, particularly in the UK where the view of the governmental establishment is apparently that the network is not managed well. Take, for example the judgement of an unpublished official paper produced late in 1983 by civil servants of three Whitehall departments—Trade and Industry, Education and Science, and Employment.

"Management education and training in Britain has developed in a largely incoherent and unsatisfactory way, which has resulted in British management being less well equipped to meet the challenges of today than its counterparts elsewhere."

On the way to reaching that conclusion the mandarins stated that there are roughly 3.5m people in Britain who do managerial jobs, from supervisors to chief executives.

Of the "complex and diffuse" training activities aimed at them, about 80 per cent are

supplied within their employing organisations (although often using tutors imported from outside). Since the remaining 20 per cent includes the many private sector schools and consultants, it is a considerable fraction of the total training takes place in the state education system, including university business schools.

A major theme of the document's discussion is: "Other countries do it better." A comparison is made, for instance, with Japan where "the company makes itself responsible for continuous management training and development throughout the employee's working life."

"Since the bulk of the effort is also company-based in Britain, industrialists here might take pride in the parallel. They might state that 'fourth training' being closely geared to the needs of the firm, is more effective than highly structured, sometimes pre-experience external training."

But, the civil servants add, "few would claim that British management generally performs as well as its Japanese counterparts. Although... many firms, especially the larger ones, have a commitment to management training with a well-developed structure to achieve this, there is a general deal of indirect evidence to suggest that this commitment does not exist throughout a substantial part of British industry."

There can be little doubt of the truth of that last criticism. My only qualm is about the mandarins' implication that big companies are better trainers

of managers than small concerns are. It isn't necessarily so.

The existence of a commitment to management training need not mean much when, as is often the case, it is a commitment only on paper. Nor is it enough to have a well-developed structure for putting people through programmes.

The structure is certainly no substitute for the spirit which animates the management training organisation. Judged by company training specialists' comments the root deficiency is that, with a few honourable exceptions, senior managers in their hearts care little about training.

### Faith

"Once in a blue moon the chairman agrees to attend the last session of a course," said a company training manager. "You think so?" It gives the participants something to work for, and they graft hard to be ready for him. Then about an hour before he's due to arrive you get a message—he has been called away to do something important. It puts a blight on the whole damned effort."

Perhaps that is why senior managers figure prominently in the civil servants' recommendations for improvement.

"Employers have to be convinced that management training is a sound business investment, not an act of faith," the document states. "Employers, directors and managers need to be more aware of the potential of new technology to improve the performance of their

business... Managers at all levels (but especially at senior levels) need to become more skilled in handling human relationships."

But while convinced that more company top managers should get personally stuck into overhauling the training system, the mandarins do not think central government needs to do the same. Its action should stop at putting in pump-priming funds here and there, encouraging a few experiments, and making speeches.

The present distribution of Whitehall responsibilities is judged to be fine. The Department of Education and Science looks after formal education. And while training involves the Manpower Services Commission as well as Trade and Industry,

and Employment among other bodies, "there does not seem to be any significant degree of overlap" between them.

Observers outside the Civil Service might think differently. For instance, a fundamental problem lies precisely in the lack of overlap.

The rampings of formal education under a separate department quarantines education away from training. The effect is to perpetuate the shibboleth that the first is superior to the second, which in turn bedevils training with the reputation of being something fit only for people who have failed in education.

That may be a good part of the reason why so many image-conscious senior managers refuse to take any interest in it.

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## Management Education 3

## Good managers need more than intellect

"There is now a growing interest in management education, and it is expected that in the next few years the increased quantity and quality of management education of all kinds will be making an important contribution."

—National Plan, 1985

BRITAIN'S ill-fated National Plan was published 20 years ago this month. A measure of its success is that the target the plan set, and to which management education was expected to contribute, was annual growth in the UK economy of 4 per cent.

That rate has been touched in two recent quarters, but for the rest of the intervening period the economy has moved ahead far more slowly—and sometimes gone backwards. The blame cannot be fixed squarely on management education, but it has certainly not lived up to expectations. A clue to the reason may lie in the way management education was looked on at the time the National Plan was prepared.

Although it referred to management education "of all kinds," including training activities, the most important contribution was expected from university business schools. These were being set up following the Franks Report two years before, which in turn followed the Robbins Report's proposal of expansion of higher education.

Both reports shared the belief that education improves the capacities of people, including their work capabilities. Higher education would therefore make its graduates more effective workers.

## Slow

Those coming from the new specialist management schools' postgraduate courses as masters of business administration would therefore be equipped to master industrial and commercial advance. By the nature of their training, the new MBAs were expected to be the UK's leading managerial force.

Today, few people outside management school classrooms would accept that MBA courses necessarily equip graduates to run a business operation well. The consensus is that the only thing which distinguishes those graduates as a body from other candidates for management careers is that they all have certificates saying they are MBAs. By the measure of job performance, they range individually from very good to very bad.

Most companies in Britain, with the exception of financial institutions and management consultancies, have been slow to recruit them. Organisations such as Marks & Spencer, Sainsbury's, ICI and Hewlett-Packard have a few in the middle to higher levels, but they have been recruited on their experience and personal attributes. The fact that they have a postgraduate management degree is incidental.

One of the minority of companies which recruit MBAs as a matter of policy is Courtaulds. Sir Christopher Hogg, its chairman, is an MBA from Harvard Business School in the U.S. He says postgraduate courses can give graduates "a rigorous conceptual approach to the overall

## Schools

management of a business, which is extremely important." But he does not regard management candidates with MBA degrees as necessarily superior to those without them. Besides the conceptual skills of the intellect, good managers "need a passion for their products and about their customers—there has to be a soul in the mix as well as a brain."

"I would not recruit an MBA who could not show an understanding of what is done in manufacturing and what is required of the people in it."

In Continental Europe, companies have mostly been slow to give holders of the postgraduate degree the preferred status they receive in the U.S., where management schools were set up about a century ago. European top managers share Sir Christopher's view that each MBA differs markedly in practical managerial abilities.

Dr Kees Krombeen, corporate director of management development for the Philips group, says the degree training "is not enough by itself, because to be successful as a manager and not just as a backroom specialist one needs many qualities which are not intellectual, but personal, such as leadership."

Mr Jean-Louis Masurel, chief of Most-Hennessy and another Harvard MBA, also has a policy of recruiting from the management school courses. But he says: "We do not recruit their graduates just because they are MBAs. We do not promote people just for that reason either."

"It is not necessary to be a business graduate to become a good manager."

## Collaboration

The message from the employment market this side of the Atlantic seems clear. Full-time postgraduate courses in management given by university-linked schools to students chosen primarily on their success in their previous academic studies as undergraduates are not the necessary preparation for management work that they were thought to be 20 years ago.

Even Mr John Egan, chairman of Jaguar Cars, who has a degree from London Business School, doubts the widespread utility of such courses.

"I would not dream of sending a promising manager from here for a long full-time course like that," he says. He values MBA training, but of Jaguar's purposes thinks it would be best provided through a part-time programme. The company is working to set one up with Warwick University.

Collaboration between companies and educational institutions on degree courses is rare

but there has been a rapid increase in school-based part-time MBA programmes. They are offered by several of the state-supported schools alongside their full-time courses and a variety of self-financing programmes for working managers. They do not have the status of degree studies, but self-financing activities can provide the schools with important income—in some cases up to about half their annual budget.

But two professors from the City University Business School in London have argued that the degree-awarding institutions are unlikely to provide fully the educational needs of practical managers as long as the schools remain tied to state-financed higher education.

Professors Brian Griffiths and Hugh Murray say the supply of public funds "drives a wedge between producer and consumer with the result that, as producers, the business schools are not sufficiently responsive to the needs of consumers."

They propose that schools wishing to continue offering high-level management education from postgraduate studies onwards should be given a "golden handshake" from the state and thereafter finance themselves. Those wishing to stay within the university system should be confined to teaching management at undergraduate level.

## Tempted

The argument has impressed Sir Keith Joseph, Secretary for Education and Science. Although rejecting the idea of obliging the schools to go private, he has told them he would like to hear from any "which may be attracted to becoming independent of public funds and which is prepared to consider the conditions under which it would be feasible to achieve this objective."

Since Sir Keith did not make his offer until the late summer, it has not been fully considered by many of the schools. But some are tempted.

The only reason why at least one has not come forward already is the fear that the Education Secretary will be forced to withdraw his invitation by pressure from the universities at large. They can be expected to put up strong resistance to losing their business schools, not least because they benefit from the income generated by the self-financing programmes for working managers.

If the invitation was withdrawn, any school which had responded to it would have damaged its relations with the parent university to which it would have to remain tied.

Sir Keith has recognised this obstacle, and has promised to seek some better way of enabling schools to let him know of their interest in going private, and the terms on which they would be prepared to do so. It would be heads of the majority of business schools seem against cutting their financial ties with the state system. The prime reason for their opposition appears to be anxiety about the MBA courses which they often still regard as the pinnacle of their existence.

They argue that the loss of public funds would mean that the costs of running the postgraduate programme had to be covered by the fees charged to students. The consequence would be to increase fees to an amount that few students would pay, even if loans were made more available. MBA courses would go into decline, depriving Britain of the best means of educating the managers needed to run industry and commerce. That argument is very much the one which inspired the creation of university business schools and the full-time postgraduate management courses 20 years ago.

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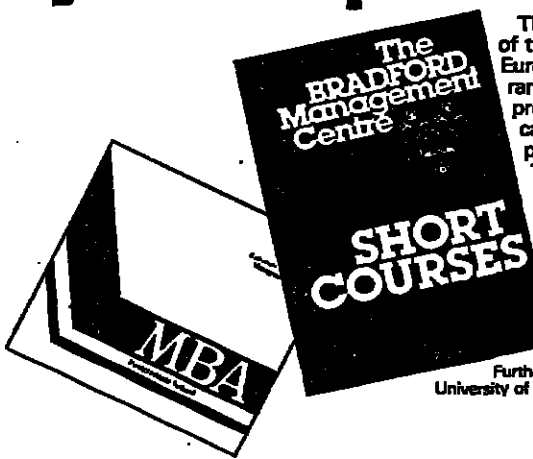
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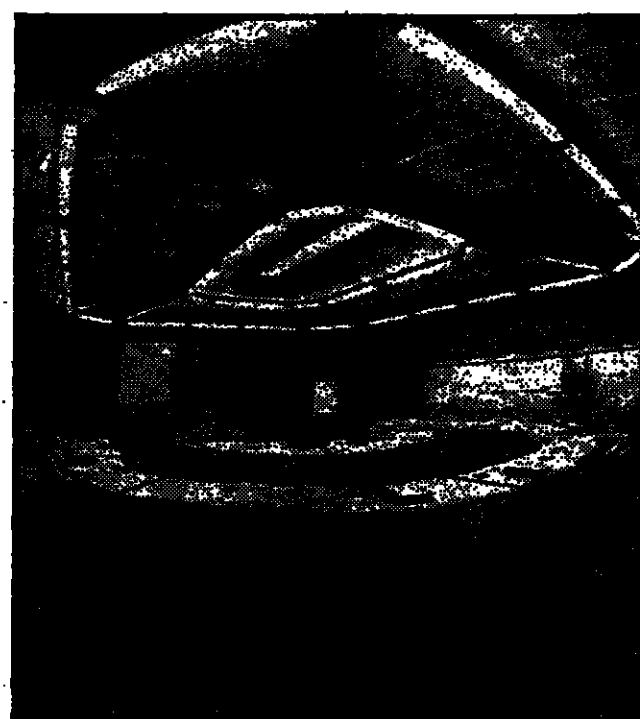
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## Management Education 4

# Search for the gift of grace

### Leadership

CHIEF executives aiming to make their managers better entrepreneurs often plump for teaching them leadership. As a result, the management education and training network offers an increasing number of programmes attempting to achieve this ambition.

Their approaches range widely. Some are fairly standard courses, conducted in classrooms and even including scholarly lectures. I once heard a training chief give a polished analysis of Mark Antony's "Friends, Romans, countrymen..." speech from Shakespeare's Julius Caesar. The leadership abilities under study were not those of Caesar (who was, after all, dead when the speech was delivered) but Antony's in turning the Roman mob against the murderers of the former emperor.

Other programmes are more portable, making use of videos among numerous sophisticated aids. A third kind sends managers into the open air to learn from practical exercises, often physically demanding if not downright hazardous.

Some managers look down on such physical goings-on as being fit only for hearties with low foreheads. But as I know from chaperoning experience, one's performance in the exercises which is rigorously analysed and discussed afterwards - makes one want to improve.

### Charismatic

All the efforts to teach managers leadership, however, are hampered by a difficulty which makes it hard for them to guarantee success. In spite of the existence of enough theories of leadership to paper numerous boardrooms, nobody is sure what it is - except possibly something which, by definition, is possessed by chief executives.

Of the various kinds of leadership suggested by theorists, the one which seems most attractive to thrusting managers is the "charismatic" type. It was first described by the German sociologist Max Weber, who died in 1920.

Charismatic (which means "having the gift of grace") was his name for one of what he thought were three different ways of exercising authority over groups of people. The other two are the traditional type, and the bureaucratic.

Weber claimed that although in practice leadership is never of any single type, one of the three always predominates. The sole position changes with circumstances, including the ideas prevailing in the society concerned about rights, duties and so on. If the dominant type loses adequate support it is replaced by another.

It is when dissatisfaction with the prevailing leadership style is extremely severe that the charismatic type is most likely to take over.

Of the three, it gives the strongest personal power to the leader - but it can have uncomfortable consequences for many followers.

Max Weber's book *Social and Economic Organisation* defines the charismatic type as founded

on: "A certain quality of an individual personality by which he is set apart from ordinary men and treated as endowed with supernatural, superhuman or at least specifically exceptional powers or qualities."

That definition can accommodate not only the charitable career of a Christ, but also the crimes of a Hitler.

The favourite of Weber was the bureaucratic option. He saw it as the type most suited to technologically advanced societies with economies based on mass production. He felt that bureaucrats would be able to plan scientifically the future course of the organisation they were in charge of, and implement their plan by rational and impartial methods.

As the route to be followed was scientifically charted, mere human leaders would take a back seat. Authority would be vested not in people as people, but in certain clearly defined jobs or "offices." The persons chosen to hold them, strictly on objective merit, would leave behind their self-interest and other follies and wield the office's power dispassionately and logically.

Alas, real-life bureaucracies have failed to come up to such expectations. One reason is that the necessary science of forecasting future events, especially in terms of people's behaviour, remains undiscovered. That may explain why the heads of big companies now want subordinate managers to be more entrepreneurial.

If bureaucracy failed in face of new changes in external conditions, then in Weber's view it would not necessarily be charismatic leadership that took over. Dominance might equally well pass to the traditional style.

It is a bit like the bureaucratic kind. The main difference is that power is vested not in "offices" but personalities, and they base their authority on getting followers to believe in and act by con-

venient myths and established precepts instead of scientific rules.

While the essence of Weber's theory that there are different types of leadership still lingers, recent years have brought a variation on the theme. It is based on the idea that circumstances are usually too complicated for any one person to have the qualities needed to take the lead at all times. The remedy is to combine the requisite qualities in a team.

One version of this approach has been developed by the British psychologist Dr Meredith Belbin. He has produced tests which he believes identify the range of necessary qualities, so that people with some but not others can be assembled into leadership teams. The qualities are of eight main kinds which he names and typifies as follows:

### Priorities

Chairman - able to clarify goals and priorities, motivate colleagues, promote taking of decisions.

Implementer - to organise ideas and plans into practicable courses of action.

Shaper - to challenge and pressurise colleagues to find ways round obstacles.

Plant - to create new ideas, solve difficult problems.

Resource investigator - to seek information and explore possibilities, get to know and negotiate with potentially useful outsiders.

Evaluator - to review all options and analyse their likely outcomes.

Team worker - to listen, build relationships between colleagues and soothe away antagonisms.

Completer - to search out errors, omissions and oversights, keep others to schedules and targets.

Dr Belbin tests his approach by assembling teams from senior executives attending courses, and then pitting the teams against one another in a

demanding management exercise. Unfortunately, although the theory suggests that the team with the best balance of the different attributes should win, it does not always do so. On at least one occasion a team composed entirely of resource investigators, for example, has beaten the rest hollow.

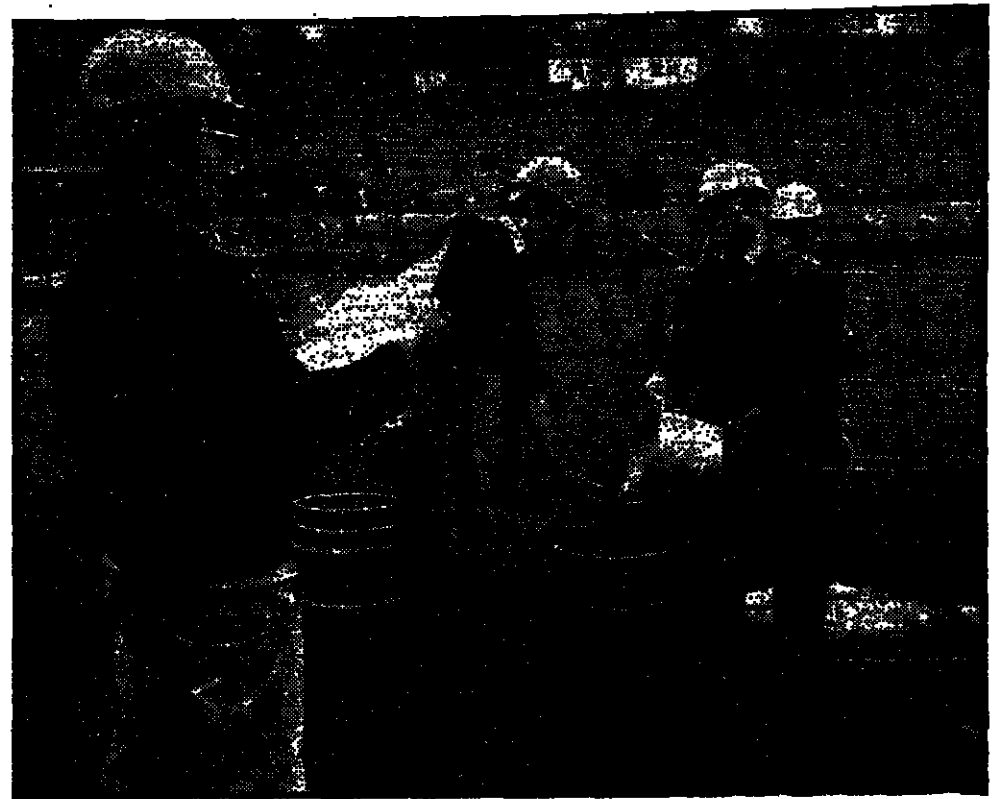
Another approach, based on the idea that good leadership is produced not so much by qualities born into people as by skills that can be learned, is represented by Professor John Adair of Surrey University.

In his book *Effective Leadership*, he maintains that the leader of a team tackling a job must keep in balance three different needs. These overlap, so that meeting any one of them depends on also meeting both the others. The first need is to achieve the objective. The next is to develop the followers as a team. The third is developing them also as individuals.

But not all theorists in the field hold that the essence of good leadership lies in abilities possessed by people or in as yet undiscovered scientific laws of organisation. Professor Alistair Hunt of South Bank Polytechnic suggests the key is the existence of an objective to which the head of the group is committed, and which all the followers can share and recognisably contribute to achieving.

The idea, put forward in his book *Leaders We Deserve* is that the common understanding of the group's objective and how it depends on the different members' contributions serves as an ethical criterion to regulate how they behave towards one another.

The conclusion appears to be that the best way a manager can get others to follow is by ensuring that the operation's customers are supplied with a service which is widely seen as having unmistakable value. Perhaps that is why Harvard Business School has now started teaching ethics as part of its management courses.



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## Shop around for right pedigree

### Checklist

MANAGEMENT courses tailored to the needs of specific organisations have been one of the market's major growth points. But many company managers seeking a tailor-made programme has been fobbed off with an off-the-peg, at best superficially changed.

Not so Jaguar Cars, however, which believes that its collaboration with the Cranfield Business School has provided it with a finely fitting programme for the company's senior managers. For the benefit of others who would like to follow suit Mr Tony King, Jaguar's training manager, has produced a 10-point checklist of the most important things to watch out for when working with external course-suppliers to develop an effective tailor-made.

1-See that the supplying organisation has the right "pedigree." It should have provided good comparable programmes for other successful companies. Ask for a list of previous clients and check with them.

2-The supplier must show a demonstrably genuine interest in the situation of the client company. If there is any sign that you are being manipulated into buying an off-the-peg course, shop around somewhere else.

3-Preferably, ensure the supplier can show an under-

standing of your business's markets, technology, culture and the like. Otherwise seek guarantees that the course providers will work hard to develop the understanding.

4-Look for flexibility enabling the course to be tailored not just to the company's needs as they are at the outset, but to needs which emerge later.

5-Inspect standards in terms of practical results. The programme must enable managers to perform more effectively in the jobs they actually do, not just bless them with theoretical knowledge.

6-Select only potential suppliers who themselves ask for the programme to be jointly developed—to have the company's training specialists and senior managers involved in the setting up and running, and to be allowed into the company to research its staff's needs and to develop teaching material.

7-Demand value for money. The right product will not necessarily be the cheapest obtainable, but its costs should be fairly well in line with those of alternative programmes.

8-Ensure the teaching methods will be varied and lively, and that the materials used will be immediately recognisable to the managers taking part as relevant to their work.

9-Require that the course will build on what the managers already know rather than ignore it and inject different knowledge.

10-Check that the teaching staff have recently been or, better, still are successfully involved in business.

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# Ten steps on the ladder of power

## Politics

LEADERSHIP courses have multiplied in line with chief executives' wishes for more effective supporting staff, but there is still a lack of courses in organisational politics. Yet successful managers owe a lot to their political skills.

Professor Robert Sternberg, a psychologist at Yale University, has studied managers' knowledge of three key aspects of their jobs:

● How to manage their own work by setting the right priorities.

● How to manage subordinates.

● How to manage their "career" in terms of ensuring that their superiors see their performance as effective, whether it is or not.

Of the three, he has found that the ability to manage one's career is the one most decisively linked to success in managerial jobs.

Since the professor's findings confirm what many experienced

executives knew already, the dearth of courses in internal politics may seem strange. The main reason for the lack is perhaps that company chiefs are chary of having training politicians under them, preferring to believe they run their own show without manipulation from below.

Even the few courses which include sessions on the topic tend to disguise it under names such as "effective communications." There appears to be a general belief that the best way to treat organisational politics is to sweep them under the official carpet.

A rare exception in the training field is Dr Virginia Schein, a U.S. management consultant, who taught at Yale and at the Wharton Business School before branching out on her own.

When teaching about the workings of company politics, Dr Schein takes an attitude resembling that of an experienced biology teacher discussing the natural functions. She cannot see that there is anything to be ashamed about.

No matter how rational a company's organisation chart

may be, managers continually have to work against political opposition, she says. To be effective, especially in getting changes made, they must know their political power bases and how to use them — even to the extent of deceiving colleagues likely to frustrate their aims.

The power bases are of seven main kinds, each having risks as well as advantages.

First comes expertise, or being seen by the company as the only person who could cope with some type of crisis. Expertise can be exploited politically if it is supposed to lie in some area which the organisation has recognised as a problem or opportunity.

The danger is that experts can over-reach themselves, particularly if they make too much play with jargon, as well as be undermined by adroit colleagues.

One undermining tactic is to represent the expert to top management as over-worked and in need of help from people under someone else's control.

Dr Schein's name for the second power base is "assessed stature." It boils down to having a general reputation as a winner. Its flaw is that, like the rainbow, it comes and goes.

While achievable by deft publicising personal successes, it is made hard to maintain by the near impossibility of keeping secret inevitable failures.

The third base, credibility, depends much on a person's prominence outside the company through such vehicles as professional institutes, local government and charitable works.

The snag is that the value set by the employing organisation on external activity depends on the attitudes of senior management, which are prone to change. What was credibility last Friday night may be absurdity on Monday morning.

The fourth base is information.

Next comes the base of mobility, or the possession of skills readily transferable to some other job. But if managers make their mobility too visible, their chiefs may decide to dispense with and replace them quickly rather than risk having them leave at some later and less convenient date.

The fifth base is control of information. A good way to build it up is to develop external sources of data which few, if any, colleagues are likely to get. The outside intelligence can then be sat on, traded with colleagues for further information, or passed on to them in accurate or distorted versions.

Would-be intelligence controllers have an increasing problem in the form of computer technology which tends to diffuse incoming data more widely through organisations.

That may be why executives responsible for installing new technology in their companies say they expect as much resistance from colleagues in middle and senior management as from trade unionists.

But the other two of Dr Schein's power bases seem likely to be more durable.



Henley Management College, overlooking the Thames

The sixth is called political access. It is attained by cultivating an underground network of friendships with colleagues in other sections, no matter how low their rank.

An undercover agent in even a minor job in a neutral department might swing its support crucially in case of need.

Informal links also greatly increase one's prospects of discovering what is going on.

The danger is that managers who too obviously cultivate a wide network of friendships might be seen as insufficiently loyal by their own departmental colleagues.

The result could be a loss of the seventh power base—group support. It consists in having the manager's domain united in unwavering pursuit of his or her important aims. A particularly effective way of fostering group support is to convince everybody in one's department that the rest of the organisation is plotting their ruin.

Once the most appropriate power base has been built, they can be exploited in 10 main ways.

The first is to develop well-advised formal links with whichever departments are important to the manager's schemes. Such links can serve as a deterrent to the use of isolating tactics by opponents.

The next is to present a conservative image. Enthusiasm in a manager needs only a little unwarranted aid by adversaries to be seen by senior levels as near-insanity. It is best to phrase important proposals so that they appear only a modest adjustment to the status quo, and to concentrate on unimaginative aspects such as the prospect of financial benefits all round.

The third is to bring identifiable opposition into the open. If opponents are obviously invited to air their views at a meeting of all involved, their strength can often be dissipated.

"Allying with powerful others" is fourth. It does not mean only courting the advance approval of top management.

Time is also well spent in seeking to "understand" the problems of key staff elsewhere in the company.

From that follows spearheading one's own proposals with measures ostensibly designed to reduce colleagues' difficulties, especially if these are trivial.

To paraphrase the rugby football maxim: get your reciprocation in first.

Tactic

Sixth comes stalking while the iron is hot. Politicking through one proposal successfully can often ease the passage of another. If the second scheme is controversial and has been rejected, it can still be got through sometimes if it is camouflaged as a consequence of the one which has just been approved.

This tactic, Dr Schein's seventh, is called using a neutral cover.

An allied tactic may be to limit the outflow of information about the scheme. Plans which would call forth determined opposition if revealed in their full glory frequently go through on a series of nods if unveiled piecemeal as a catch a tartar.

sequence of apparently self-contained parts.

The ninth play is research. It consists in setting up a study of one's proposed scheme to produce "hard data" which, whenever practicable, should be true.

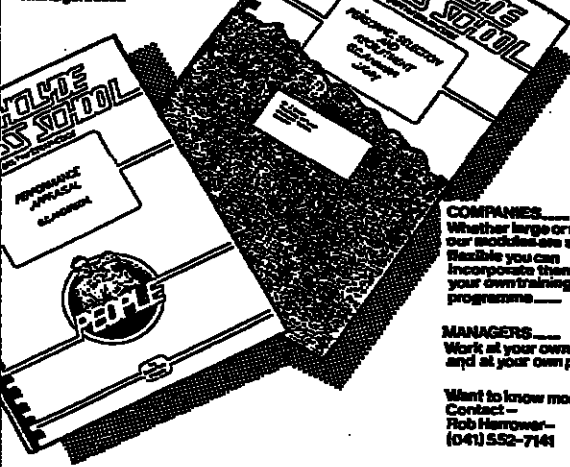
Either way, discussion of the data with other people should always be introduced with the words: "Well, here is the evidence. I am not inclined to believe all of it myself. But we cannot just ignore it if I suppose."

Sometimes a manager who has brilliantly politicked a pet scheme through to approval will suddenly be faced with strong competition from someone else to take the project over. In that case Dr Schein thinks it may be best to use the last of her tactics—withdrawal.

If there is any appreciable risk that one's scheme will turn out a failure it is usually wisest to try to manipulate someone else to volunteer to take it over. Of the various ways of preserving a power base, few are better than leaving others to compete for the right to

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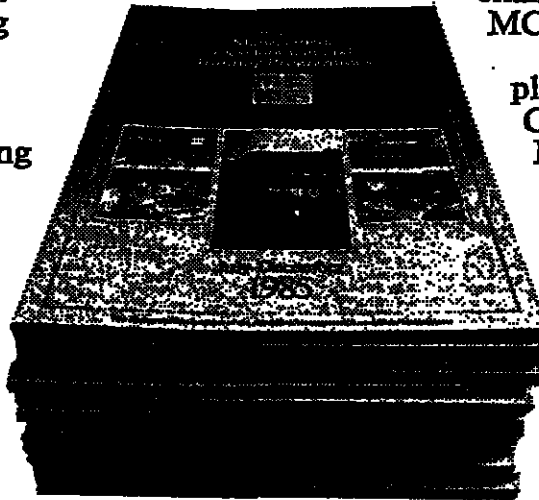
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Price Last Div. Yld.

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ALS (Miscel)

1990



## INTERNATIONAL APPOINTMENTS

## Management changes at American Brands

BY PHILIP HALLIDAY

AMERICAN BRANDS, the U.S. tobacco and packaged foods group, is to restructure its management from January 1 1986.

Mr William J. Alley, executive vice-president and chief financial officer, is to become vice-chairman. In this new position Mr Alley will oversee group strategy.

Mr Alley, who has been a director of American Brands since 1979, will continue as president and chief executive

officer of Franklin Life Insurance, the financial services subsidiary of American Brands.

Mr Arnold Hanson, senior vice-president and chief counsel, will succeed Mr Alley. Mr Paul Randour, a partner in the law firm Chadbourne, Parke, White and Wolf, where he handled the affairs of American Brands, will become senior vice-president and chief counsel.

Mr Robert J. Rukeyser, vice-president, public affairs, will become vice-president, office pro-

ducts, a new position, and will become a director.

The changes, which the company said would provide greater management continuity, are part of a major organisational restructuring plan.

Under the terms of the plan, which is subject to stockholders' approval in December, American Brands is to become a holding company and all its operating units, among them Gallaher, the UK cigarette producer, are to become subsidiaries operating as autonomous units.

## Enagas names new chairman

BY DAVID WHITE IN MADRID

ONE of the Spanish negotiating team which settled the terms for next year's EEC entry, Sr Juan Badosa, has been named to succeed over the chairmanship of the national gas company Enagas.

Sr Badosa, 40, was up to now director-general for the ministry at the economy and finance ministry. Besides the EEC talks,

he was also involved in negotiations with Algeria which resolved a long quarrel over Spanish natural gas imports earlier this year.

The appointment is in line with a recent trend towards placing director-general posts in state-owned companies rather than independent businessmen,

who were favoured at the start of the socialist administration three years ago.

Sr Badosa previously held a Research post at the Ministry of Commerce and worked at the Spanish embassy in Warsaw during the last centrist administration.

## UAL in moves to strengthen management

By Our Financial Staff

UAL, the parent of United Airlines, the largest U.S. carrier, has made changes to its management structure.

Mr James Hartigan, president of United Airlines, will take the additional post of chief executive officer. Mr Hartigan will be in charge of the airline's day-to-day operations and oversee the proposed merger with Pan Am's Pacific operations. Department of Transportation approval for the merger is expected by the end of October, the company said.

Mr John Cowan, executive vice-president of finance for United Airlines, will become chief financial officer and vice-chairman of UAL. The post of chief financial officer is a new one.

Mr Richard J. Ferris remains chairman of United Airlines and chief executive officer of Hertz Corporation, the car rental agency acquired by UAL in August, will become a director of UAL.

## Henry Slack named as new president at Minorco

BY OUR FINANCIAL STAFF

MINERALS AND RESOURCES CORPORATION (MINORCO), the Bermuda-based international investment group controlled by South Africa's Anglo American Corporation and De Beers Consolidated Mines, has named Mr Henry R. Slack president.

Mr Slack, who has been a director of Minorco since 1981, succeeds Mr H. Ronald Fraser who is retiring. Mr Fraser will continue as a director.

BOND CORPORATION, the Western Australian brewing, property and resources group, has appointed two Sydney-based executive directors to the board.

Mr Bill Waterberg has been appointed executive director to head brewing division, which will consist of the new brewing acquisition Cattlemaine Tooheys as well as the existing Perth-based Swan Brewery.

Mr Robert J. Rukeyser, who has been appointed executive director to head the coal operations and the Westerns Bond retailing division.

EASTERN AIRLINES, the Miami-based carrier, has named Mr Joseph B. Leonard president and chief operating officer.

Mr Leonard, who was executive vice-president and general manager, succeeds Mr Frank Borman. Mr Borman will continue as chairman and chief executive officer.

Mr Leonard and Mr Wayne A. Yeoman, a senior vice-president, have joined the board of Eastern. They replace Mr Russell L. Ray and Mr Morton Ehrlich who resigned in July.

BAHCO, the Swedish engineering group, has appointed Mr Per Sandberg chief financial officer. Mr Sandberg, 51, is finance director of Svenska Varv, the Swedish state-owned shipyards group.

SYNTEX, the California-based health-care company, has appointed Mr Albert Bowers president and chief operating officer. Mr Bowers, who has been chairman and chief executive officer, will succeed Mr Richard Rogers when he resigns at the end of the year, reports Reuters from California.

Mr Bowers had expected to announce further management restructuring by the end of October.

## Baschnagel announces retirement

By John Wicks in Zurich

MR HUBERT BASCHNAGEL, head of the foreign exchange, precious-metal and money-market division of Swiss Bank Corporation, is to retire for health reasons at the end of next March. He has been with the Basle-based bank for 36 years, eight of them as a senior vice-president and five as a member of the executive board.

With a view to taking over Mr Baschnagel's position in Zurich, Mr Ulrich Leber is to be transferred there as a central manager at the start of January. He will himself be replaced as manager of the Geneva branch by Mr Charles Joerg.

## New general manager at Sulzer

By Our Financial Staff

MR RICHARD BURGER, currently head of pumps division of Sulzer group, the Swiss-based engineering company, is next May to be made a general manager of the Swiss parent company Sulzer Brothers and a member of the group management committee.

At the same time, Mr Burger will be given responsibility for the group's corporate development division. His membership of the management committee marks an up-grading of this division, which will steer research and development work, as well as such other activities as legal systems and surface technology.

Mr Burger will himself be succeeded in the pumps division by Mr Jurg Heyer, while Dr Viktor Reisinger will be made head of the heating and air-conditioning division.

## Nordfinanz chooses new head

MR KURT SCHILTKNECHT, formerly chief economist of the south-eastern region of the Deutsche Bank, is to become the new head of the management committee of Nordfinanz-Bank, the Zurich bank controlled by Kansallis-Osake-Pankki, Finland's leading commercial bank.

Mr Schiltnkecht will succeed Mr Bengt Uggla, who is to retire from the top executive position. Mr Schiltnkecht joined Nordfinanz-Bank this March.

## UK APPOINTMENTS

## Distillers makes changes

Mr J. D. S. Purves has been appointed to the board of THE DISTILLERS COMPANY from October 1 and will assume responsibility for personnel, health and safety, and legal services.

Mr D. A. Connell, managing director of John Walker and Sons, will succeed Mr P. N. Whitley, a main board marketing director, on his retirement in September 1986. Mr Connell will join John Walker and Sons on January 1, 1986 and will succeed Mr Connell as managing director.

Mr P. L. Gillen, a director of John Walker and Sons, will succeed Mr D. W. Small as managing director of John Dewar and Sons.

Mr C. N. Younghouse, managing director of Buchanan and Co, will retire in April 1986 and will be succeeded by Mr A. B. Oseroff, currently a director of John Walker and Sons. From January 1, 1986, Mr Oseroff will become managing director of Macdonald Greenlees, in succession to Mr Ross. Mr Macdonald Greenlees is at present managing director of J. and G. Stewart and will be succeeded by Mr I. E. Read of Low, Robertson and Co.

Sir Ewen Wheldon, who has been president of the ROYAL TELEVISION SOCIETY since 1979, is retiring. Mr Paul Fox, managing director of Yorkshire Television, has accepted the Society's offer to succeed him.

Mr Roberto Segre has been appointed managing director of TABS, a microcomputer chain.

From October 1, Dr H. A. Klein, Hainfield, has been appointed a director of TOUCHE, REMNANT & CO and investment director for Touche Remnant. He is deputy investment manager of Shell Pension Funds. The Hague. Total funds under management from Holland are about £3bn.

Mr Miles Templeman has been appointed managing director of THREESER WINE CHANTS from the end of September. He succeeds Mr Law Parke, who for personal reasons has asked to retire a year early. Before joining Thresher in June as deputy managing director with responsibilities for sales, marketing and personnel, Mr Templeman was director of marketing for Levi Strauss. Mr Parke is to remain a non-executive director and as a director of Whitbread retail division until his normal retirement date.

BRITANNIA INVESTMENT SERVICES has appointed Mr Paul Field as managing director of a new subsidiary, Britannia

Administration Services. He was managing director of Save & Prosper in Jersey. Mr D. C. O'Brien, a director of John Walker and Sons, has been appointed deputy chief investment director of Britannia Asset Management.

Mr R. L. Mitchell, formerly head of investment at Cornhill Insurance, has been appointed managing director of Britannia Institutional Fund Management. Mr D. C. Gillen has been appointed managing director of Britannia International Asset Management.

Mr Bernard Heywood has been appointed deputy chairman of the south-eastern region of the BRITISH GAS CORPORATION, from September 30. He is currently director of engineering of West Midlands Gas.

SHANKS & McEWAN (CONTRACTORS) has appointed three new directors: Mr A. D. (Sandy) Robertson, who will be responsible for waste collection and disposal; Mr Ken Morla for technical services (quarries) and operations at BSC Clydesdale Works; and Mr Alan Gordon Walker as contracts director.

PICET ASSET MANAGEMENT UK has appointed Mr Pierre de la Roche as managing director. The appointment follows the return to Picet Et Cie in Geneva of Mr Jean Pilloud.

Mr Alan Gordon Walker has been appointed a director of HODDER & STOUGHTON HOLDINGS from October 1. He remains managing director of Hodder & Stoughton Paperbacks.

Mr T. J. Nardicchia has been appointed managing director of WARKFORD INVESTMENTS.

Mr John Perkins, commercial director, will head the CADBURY TYPHOO foods business centre, and Mr Paul Sands personnel director, becomes the new deputy director of Cadbury Typhoo.

Mr Alan Charlesworth, managing director of Mintel Publications, market research analyst, has been appointed to the board of its parent company, the KAE GROUP. Mrs Bridget Garnett and Mrs Janet Gilks have been appointed directors of Mintel Publications.

Mr Michael Chapman, previously an assistant general manager, corporate finance division, MIDLAND BANK, has been appointed a general manager, group risk management. He succeeds Mr Michael Wallis, who is retiring.

Mr Barry Spencer, controller of sales at Thames Television, is leaving the company to become new business director at media buying agency, ALL MEDIA SERVICES, from October 1.

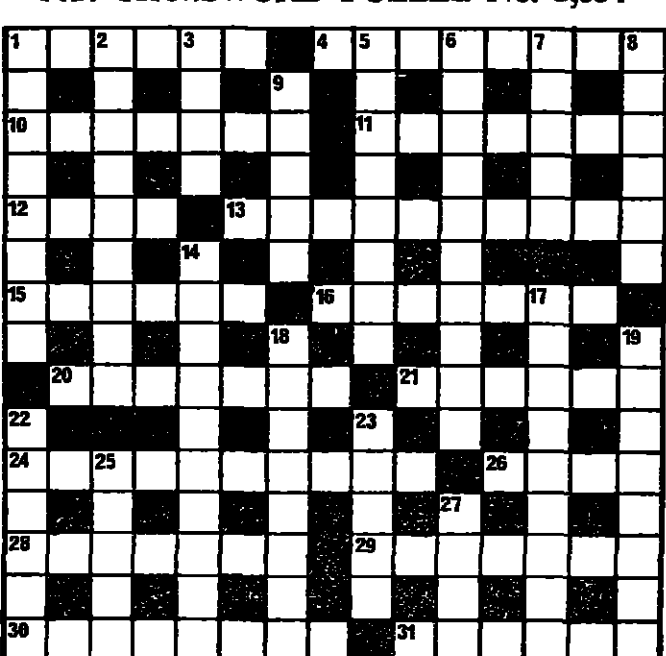
Mr Peter Johnston has been appointed general manager of LLOYD'S. He was previously in managerial positions at both Sun Alliance Insurance Group and MEPC.

## FT UNIT TRUST INFORMATION SERVICE

## AUTHORISED UNIT TRUSTS

Unit Trust Name	Investment Objective	Manager	Assets (£m)	Units (m)	Price (£)
Abney Unit Trust	Equity	Abney Unit Trust	100	100	1.00
Abney Unit Trust (2)	Equity	Abney Unit Trust	100	100	1.00
Abney Unit Trust (3)	Equity	Abney Unit Trust	100	100	1.00
Abney Unit Trust (4)	Equity	Abney Unit Trust	100	100	1.00
Abney Unit Trust (5)	Equity	Abney Unit Trust	100	100	1.00
Abney Unit Trust (6)	Equity	Abney Unit Trust	100	100	1.00
Abney Unit Trust (7)	Equity	Abney Unit Trust	100	100	1.00
Abney Unit Trust (8)	Equity	Abney Unit Trust	100	100	1.00
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Abney Unit Trust (10)	Equity	Abney Unit Trust	100	100	1.00
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## F.T. CROSSWORD PUZZLE No. 5,834



- ACROSS**
- 1 Urge on visibly—if audibly (6)
  - 4 Seen through a glass lightly? (8)
  - 10 Complicated counter beat (7)
  - 11 Run into some of the defence (7)
  - 12 Lean Lathario? (4)
  - 13 His success is proved by capital gains (4-6)
  - 14 Sorted out and put away (6)
  - 15 Seek laid out in Scots valley (7)
  - 20 It results in a free kick for the away team (7)
  - 21 In opera Eugene shows singular spirit (8)
  - 24 Divine, the French crew's accommodation (10)
  - 26 A near-sighted gathering (4)
  - 28 Treacle pudding for a tragic girl (7)
  - 29 Mouse-catcher not yet used in the plant (7)
  - 30 Rome's incorrectly placed in England (8)
  - 31 Ridiculed for being poorly dressed (8)
- DOWN**
- 1 It could be simple curiosity (8)
  - 2 Putting in time at this is fun (5-4)
  - 3 A picking-up point (4)
  - 5 One who takes off from Port Said (8)
  - 6 How Italian and German head directions become insecure (4, 6)
  - 7 Respond to a trace of difference (5)
  - 8 Money boxes? (6)
  - 9 Not so many, we infer (5)
  - 14 Our respect will be misplaced for such an oppressor (7)
  - 17 Flashy sort of striker (9)
  - 18 It may be regarded as a form of curiosity (3, 5)
  - 19 Introduced the new resident (8)
  - 22 Where T. comes for pudding (6)
  - 23 A wedge shot that doesn't go straight (5)
  - 25 Rhubarb he planted in a strange setting (5)
  - 27 Mount hotly-tipped, doesn't always run (4)
- The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

## FINANCIAL TIMES

Is proposing to publish a Survey on the

## UK BUILDING INDUSTRY

on Thursday, November 7 1985

Advertising copy date for this Survey is

Thursday, October 24 1985

For further information please contact:

Advertisement Department

Financial Times, Bracken House

10 Cannon Street, London EC4A 3DF

Tel: 01-248 8000 Ext. 4148

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<b>Life Insurance PLC</b> October 1972	<b>Confidential Life Insurance Co.</b> 301 Chancery Lane, WISPA Lane, 07939 325251	<b>Contract Portfolio Life Ins. PLC</b> Central House, Chichester, Hants. 01242 0282	<b>Legal &amp; General (U.K.)</b> Lawrence House, Kings 0992 53371																																																																																																																																																																																																																																																																																																																							
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### 3-month call rates

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## Indices

	Sep. 26	Sep. 25	Sep. 24	Sep. 23	Sep. 20
Class Chrg					

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*Entrepreneur Gloria Lemieux trading  
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